—THE—

Therapeutic Gazette.

Old Series, Vol. VI. | Detroit, August 15, 1883. | New Series, Vol. IV. No. 8

CONTENTS.

PAGE.

Original Department.

A Clinical Study of the Action and Uses of Caffeine and Convallaria Majalis as Cardiac Tonics. By Beverley Robinson, M. D. ... 309
Yerba Reuma in Catarrh. By F. C. Herr, M. D. ... 315

Reports on New Remedies from Private Practice.

Arbor Vitæ (Thuya Occidentalis) in Spermatorrhœa. By H. C. Noble, M. D. ... 316
Grindelia Robusta.—Piscidia Erythrina.—Witch Hazel (Hamamelis). By Justyn Geo. D. Douglas, M. D. 317
Eucalyptus Globulus in Diphtheria—Kava Kava in Enuresis. By C. N. Palmer, M. D. ... 317
Aletris Farinosa as a Uterine Tonic. By D. P. Duncan, M. D. ... 318
Cascara Amarga. By A. G. Bruce, M. D. ... 318
A Singular Effect of Cascara Sagrada. By E. A. Herig, M. D. ... 318
Stigmata Maidis in Acute Cystitis. By Wm. H. Rush, M. D. ... 319

Translations.

On the Treatment of Chorea ... 319
American Drugs—By J. Moeller ... 323
Secret Remedy Nuisance and Quackery ... 324
Hydrobromethyl as an Anæsthetic During Parturition ... 325
Aluminium in Tuberculosis of the Lungs ... 326

PAGE.

Extract of Calabar Bean ... 326
New Parasites that Infect Man ... 326
Iron Administered Subcutaneously ... 326
Wood-Pulp as a Surgical Dressing ... 327
Sandal Essence ... 327
Boldo ... 327
The Employment of Corrosive Sublimate in Solution During and After Labor ... 327
Naphthalin Treatment ... 327
A Case of Poisoning from Picric Acid 327
The Micro-organism of Pneumonia ... 328
Japanese Kak-ke (Beri-beri) ... 328
Bacillus Malarial ... 328
Hydrastis Canadensis ... 328
Atropine in Hyperidrosis and Urticaria ... 328
Treatment of Diabetes Mellitus with Permanganate of Potassium ... 328
Chinoidin Citricum ... 328
Antiblenorrhagic Boli ... 329
Guachamaca ... 329
Convallaria Majalis ... 329
Chromic Acid in Ulcers of the Tongue 329
The Local Treatment of Erysipelas ... 329
Euphorbia Pilulifera: a New Remedy for Asthma ... 329
Treatment of Acute Infantile Rheumatism ... 329

Correspondence.

The West as a Field for Locating ... 329
Druggists vs. Physicians, and Physicians vs. the Code of Ethics ... 330
On the Value of Pathology in Practice 331
The Prophylaxis of Diphtheria ... 332
Numskulline ... 332
Cascara Sagrada, Compressed Troches ... 332

PAGE.

Editorial.

Is Quinine an Unstable Compound? ... 333
Remedies in Neuralgia ... 334
Cholera ... 335
Scarcity of Original Workers ... 336
Abrus Precatorius—Jequirity ... 336
Jamaica Dogwood in the Nervousness of Consumption ... 337
The Detroit Art Loan Exhibition ... 337
Errata ... 338

Book Reviews and Notices. 338

Therapeutic Progress.

The Local Treatment of Phthisis by Carbolic Acid ... 339
Cardiac Therapeutic Agents ... 341
The Contagion of Gonorrhœa ... 342
On the Relation of Partial Retention of Urine to its Decomposition Within the Bladder ... 343
Medicine as Practiced by Animals ... 344
Æsthetics and Drug-Taking ... 344
Therapeutic Novelties ... 345
Corrosive Sublimate ... 345
Hot Water in Synovitis ... 345

New Remedies.

The New Treatment of Granular Lids by Jequirity ... 345
Abrus Precatorius and its Therapeutic Use in Ophthalmic Diseases ... 349
The Use of Jequirity in Eye Diseases 351
Jequirity ... 351
Abrus Precatorius ... 351
Japanese Peppermint ... 352
Euphorbia Pilulifera ... 352
Liquor Ergotæ Purificatus in the Radical Cure of Hydrocele ... 352

Original Department.

A Clinical Study of the Action and Uses of Caffeine and Convallaria Majalis as Cardiac Tonics.

By Beverley Robinson, M. D.,* New York City.

(*Concluded.*)

Case 3.—†The following history was furnished me by Dr. R. J. Devlin, senior assistant to the medical division of St. Luke's Hospital: The patient was 44 years of age, entered the hospital December 1, 1882, and was able to give only an imperfect history. His first and only attack of rheumatism occurred seven years ago, which involved the ankles and hands, and lasted, including relapses, four months. He had never suffered any pain or distress in the region of the heart, nor palpitation. During the last two years he had been obliged to rise from four to six times during the night to pass water. No change had been noticed in the appearance of the urine. The patient thinks that the daily quantity has been excessive. During the last six months he has suffered considerably from sweating and diarrhœa. Last August he was seized with sudden failure of vision in the left eye, followed in about two months by similar changes in the right eye, and at the time of his admission his vision was not sufficiently good to enable him to read print. Œdema of the extremities appeared for the first time two months ago.

On December 2d, the abdomen being very tense, he was tapped, and 20 ounces of fluid were removed.

From this date to December 8th, there was a gradual decline of the patient, pericardial friction-sounds and valvular murmurs were distinctly heard, the œdema increased, there was no increase in the flow of urine, the patient became delirious, finally comatose, and died. At the autopsy there were found some thickenings of the cardiac valves, with atheromatous degeneration of the anterior coronary artery, and the kidneys were the seat of cystic degeneration. Patient was treated with caffeine, iodide of ammonium and infusion of digitalis.

Case 4.—*Mitral and Aortic Valvulitis; Cardiac Enlargement.*—I. K., 32 years of age, married, German, stone-cutter, was admitted to St. Luke's hospital, December 15, 1882. Patient has had four attacks of acute articular rheumatism. The first attack was in 1864; the last in 1880. He denies cardiac symptoms until six weeks ago, when he began to have slight œdema about the ankles and frequent micturition. Two weeks ago œdema became considerable and patient began to suffer from severe dyspnœa. On

*Professor of Clinical Medicine at the Bellevue Hospital Medical College.

†The heart and kidneys of the patient whose case is here reported were presented at a stated meeting of the Pathological Society, Dec. 13, 1882. (See New York Medical Record, Jan. 13, 1883).

admission, the infiltration of the lower limbs was well marked, and there was a moderate amount of fluid in the abdominal cavity. The phalanges had the familiar drum-stick extremities and the difficulty of breathing was extreme.

Examination of urine gave specific gravity 1.012; acid; albumen 25 per cent.; under microscope, blood disks, renal cells, hyaline and granular casts.

℞ Milk diet.
Fl. ext. convallariæ, M x, q. three hours.

December 16.—Physical examination showed apex beat one inch outside left nipple in the sixth intercostal space. Heart considerably dilated; marked apex thrill; intense dyspnœa; murmurs at tricuspid and mitral orifices synchronous with systole. Judging from pulse, it was also probable that regurgitation existed at the aortic orifice.

December 17.—Passed 36 ounces of urine in last 24 hours.

December 18.—Aortic regurgitant murmur now more marked than that at the mitral orifice; a few sub-crepitant râles during respiration on both sides of the chest posteriorly, pleuritic in character. Passed 40 ounces of urine yesterday.

December 19.—Urine fallen to 26 ounces. Increase convallaria to gtt. x, q. two hours; considerable dyspnœa remains, but less than previously. Difficulty of breathing both in inspiration and expiration; no nausea; pulse stronger.

December 20.—Moderate epistaxis during the night; urine fallen to 20 ounces; no improvement of urinary secretion from the use of convallaria—stop it.

℞ Infusion digitalis, ʒ j, t. i. d.

December 21.—Breathing easier; did not sleep well; increase digitalis to ʒ j q. four hours.

December 22.—Pulse 72, regular.

December 23—P. M.—Erysipelas distinguished on forehead.

December 25.—Erysipelas over face.

℞ Brandy, ʒ ss, every four hours.
Tr. chloride of iron, gtt. xxv, t. i. d.

December 26.—Erysipelas spread over cheeks; tr. of iron stopped. During last 24 hours urine rose to 50 ounces. Patient transferred to isolating ward. ℞ Milk and lime water; lead and opium externally.

December 27.—Stimulants increased; erysipelas stationary.

December 28.—Facial aspect improved; quantity of urine diminished, but precise quantity passed not noted.

December 30.—Erysipelas subsided; difficulty of breathing intense; amount of urine 13 ounces. Patient began breathing noisily, almost stertorous at times.

December 31.—At 5:45 A. M. patient died suddenly on night chair; day previous was feeling better up to 6 P. M., and suffered less from dyspnœa.

Note.—Urine in this case was not increased by digitalis, or convallaria, but was much augmented by the use of tr. of the chloride of iron. Patient complained after taking the iron of feeling much weaker and of increased difficulty in breathing, although the urinary secretion was more active.

Autopsy.—Right pleural cavity half full of clear fluid; left cavity contained 7 to 8 ounces, of similar fluid; slight amount of serous fluid in the pericardial sac; new adhesions of plastic lymph over the left auricle and left ventricle: also adhesions and deposits over right heart; weight 22½ ounces; aortic valves atheromatous, and bound down in part; contained vegetations; mitral valve markedly calcareous in places, contained large bony masses as large as sharpened end of lead pencil; free borders thickened, causing stenosis and regurgitant condition. Tricuspid valve normal; left lung had some adhesions at apex; right lung had recent adhesions at apex. Left kidney large, pale, cortex thickened; weight 5 ozs.; right kidney similar changes; weight 4½ ozs. Both kidney show distinct parenchymatous degeneration. No fluid in abdomen.

Case 5.—*Cardiac Dilatation.*—The case was that of a woman 42 years of age, widow, born in the United States, seamstress, who entered St. Luke's Hospital December 21, 1882, with the following history:

Patient never had rheumatism. Eight years ago had general anasarca; has suffered from palpitations one year, swelling of hands and legs more or less, during that time; no headache; morning nausea several months; six months ago œdema of feet increased; scanty urine one year; cardiac palpitations worse latterly; vision normal; dyspnœa for some time past on slight exertion; patient is just at menopause and complains of nervousness; appetite poor; bowels relaxed; marked œdema of legs; examination of urine shows specific gravity 1012, neutral, trace of albumen; microscopic examination negative.

December 22.—Pulse compressible and dicrotic but otherwise regular; no abnormal murmur in præcordial region; normal heart sounds feeble and distant; slight epigastric pulsations.

Diagnosis.—Simple dilatation of the cardiac cavities:

℞ Fl. ext. convallariæ, gtt. x, q. 3 h.

Patient passed 24 ounces urine daily.

December 24.—Patient passed 24 ounces urine during last 24 hours.

December 25.—Œdema of legs has subsided; no dyspnœa.

December 27th.—Slight systolic murmur in third intercostal space, possibly due to anæmia. Pulse apparently stronger.

December 28.—Still passing about 24 ounces of urine daily.

Note.—Convallaria has completely relieved palpitations, but has not increased the quantity of urine passed in a given time.

Case 6.—A young girl suffering with a sub-acute attack of catarrhal laryngitis already of several days' duration.

The cervical ganglia on the left side of the neck were painful and engorged; the voice was hoarse, there was moderate soreness, or pain in the throat throat and there was slight cough. The cardiac pulse depressible. On palpation the apex beat could not be discovered and by percussion the heart was shown to be dilated. Convallaria was given every three hours in doses of 5 gtts. in mixture, with a view to stimulate heart action and in this way to lessen the congestion of the laryngeal mucous membrane. In 24 hours the hoarseness and cough had both diminished, and the heart beats and pulse were slightly increased in force. Afterwards stimulating inhalations were used, the convallaria was continued and the patient soon was convalescent. The effects on the kidneys were not remarked.

Case 7.—*Chronic Pericarditis: Nutmeg Liver;*

Diffuse Nephritis.—Chas. M. Good, æt. 40, S., Eng., musician.

December 15, 1882.—Was admitted into St. Luke's Hospital.

Patient had an attack of rheumatism 17 years ago, and another 9 years ago, each involving all the large joints. The present attack began last April, and, with periods of exacerbation and remission, has lasted up to the present time. All the joints have been affected at one time or another. The hands and wrists have been most severely involved. There has been pain and stiffness but little redness and swelling. Has noticed præcordial pain and also palpitation since beginning of last attack. Also subject to attacks of vertigo. Appetite good. Bowels regular. Pulse and temperature normal.

Examination of urine 1010; neutral; regular.

December 16.—Patient has severe pain in both wrists and ankles; no redness; no swelling; some heat. Slight pain in knees. Examined by H. P.

Mitral systolic murmur heard at apex and at base transmitted into axilla.

℞ Potas. iodid., gr. x, t. i. d.

December 18.—Increase iodide to gr. xv, t. i. d.

Examined by Att. P.: Regurgitation at both mitral and aortic orifices. Aortic bruit increases downward and to left. L. aortic cusp. chiefly affected.

December 20.—Patches of erythema all over body. Stop potas. iod.

December 28.—

℞ Potas. iod.; gr. x, t. i. d.

January 7, 1883.—Patient does not bear iodide well—stop it.

January 9.—Pain in shoulders.

℞ Mist. acid salicyl., ʒ ss, t. i. d.

January 11.—Marked improvement under use of mist. salicyl.

January 13.—Pain very much improved, but not entirely controlled. Stop mist. salicyl.

℞ Tr. ferri chlor., M xxv, t. i. d.

January 15.—Pains have returned while on tr. ferri chlor. Stop tr. ferri chlor,

℞ Mist. salicyl., ʒ ii, s. q. Two hours.

January 16.—Much less pain since yesterday.

January 17.—Evening: Reduce mist. salicyl. to q. Six hours.

January 20.—Patient complains that medicine causes headache. Stop misture. salicyl.

January 21.—Pain increasing; also complains of soreness over pericardium,

January 23.—Had some pulmonary œdema last night. Heart rapid and weak. Ordered cups and mustard. Same condition exists to-day, though to a less extent.

Examined by Att. P.: Doubling of first sound at apex. No murmur. Rythmical irregularity of pulse. Sub. crep. râles over lower half of both lungs. Breath sounds slightly more feeble at right base. No pericardial effusion. Pulse 160. Hypodermic of ext. convallaria fl., M viii, administered over heart; no benefit derived, Repeated in half hour, and pulse reduced to 80 within hour-and-a-half after second dose. Last night patient was ordered ext. convallaria fl., M x, s. q., four hours, and brandy, ʒ ss q., four hours. To-day: Morph. sulph., gr. 1-12, s. q., four hours.

℞ Tr. belladonnæ, M v, s. q. Four hours.

January 23, P. M.—Morphia stopped.

January 24.—Pulse 108; more regular; no dyspnœa, Patient quite comfortable; sweating profusely.

Examined by Att. P.: Pulse 108. Regurgitant bruit heard distinctly after second sound.

January 25.—Stop convallaria and belladonna.

℞ Digitaline, gr. 1-100 t. i. d. by mouth.

January 26.—Increase digitaline to gr. 1-80 t. i. d. Pulse 100; regular. Hydrocele of l. cord.

January 27.—℞ Light diet.

Examined by Att. P.: Pulse again rapid and uneven. Possibly ulcerative endocarditis.

P. M.—Temperature 103 deg. Stop digitaline.

℞ Infus. digitalis, ʒ i, q. i. h.

January 28.—Pulse 102. Reduce digitalis to ʒ i q., two hours.

January 29.—Pulse 100. Some præcordial pain.

Examined by Att. P.: Murmurs again distinctly heard. Mitral systolic and aortic diastolic. Doubling of first sound marked at xyphoid cartilage.

January 30.—Pulse 94.

January 31.—Pulse 84–96; very irregular and intermittent, but full of strength.

Examined by Att. P.: Reduce digitalis to ʒ i q., three hours. Doubling of first sound, but no murmur; valves not calcareous. Probably heart is dilated, but the muscular tone about orifices is well preserved

February 1.—Dr. Kinnicutt's service.

Examined by Dr. Kinnicutt: Apex, 6 sp. line of nipple.

February 2.—Several loose movements, very offensive in character, accompanied by a good deal of pain. Heart active; more regular. Aortic direct murmur less loud.

February 3.—Bowels costive; painful defecation. Movements very offensive.

℞ Ol. ricini, ʒ ii.

Examined by Att. P.: Over aortic area, a distinct systolic murmur transmitted up and down sternum and along costal cartilages. Less intensity over pulmonary area. Distinct diastolic murmur heard along sternum from second interspace downward. Hypertrophy in excess of dilatation. Marked heaving impulse. No increase in liver or splenic dullness.

February 4.—Reduce infusion digitalis to ʒ ss.

February 5.—Præcordial pain again marked. Blister ordered over præcordium.

February 6.—Reduce digitalis to ʒ ss q., four hours.

February 7.—Diarrhœa still troublesome.

℞ Ac. carbol., M1-4
Tr. opii. deod., Mij. M. s. q., three hours.

February 8.—Ex. urine 1028; ac. large amount ovates.

February 9.—Has three murmurs. ℞ Morph., gr. 1-12, q. four hours—stop ac. carbol. and tr. opii.

℞ Hydrarg. bichlor., gr. 1-20, q. three hours.

February 10.—Stop digitalis. Increase morph. to q. three hours.

February 15.—Pulse has continued pretty regular and of good volume. During the past two days a marked fusiform dilatation has apparently formed on ℞ Common costal cartilage, which pulsates violently. Examined by Att. P.: Heart acting well, but respiration becoming very irregular. P. M.—Patient

comatose; extremities cold; pulse very full. 10:30 P. M. patient died.

AUTOPSY.

February 16, 1883, at 3:00 P. M.—Body fairly nourished; rigor mortis fairly marked; œdema of legs; knee joints swolen, right more than left.

Peritoneum.—Small amount of fluid; no evidence of peritonitis. Diaphragm fourth rib right; fourth space left.

Thorax.—Heart almost entirely uncovered by lung; adhesions generally distributed over right side; a few adhesions on left; right pleura contains ℥ viij of yellowish serum.

Pericardium.—Two layers firmly adherent by old adhesions.

Heart.—Enormously increased in size; left ventricular wall hypertrophied; left ventricle very greatly dilated; right ventricle moderately dilated; tricuspid valve thickened along free border; pulmonary valve normal; aortic valve has its cusps thickened, especially along the free border; the segments are retracted; there are vegetations along free border; segments of mitral markedly thickened with slight vegetations on free border; muscular tissue very fatty; aorta atheromatous.

Lungs.—Left lung badly aerated, congested and very œdematous; bronchial tubes congested and covered with mucus; right lung ditto.

Spleen.—About normal in size; quite hard local thickenings of capsule.

Kidneys.—Left slightly increased in size; capsule adherent in places; surface granular; tubes both of pyramids and cortex show fat; markings fairly well preserved in places; chr. diffuse nephritis.

Stomach.—Mucous membrane congested and thickened.

Bile Duct.—Previous.

Intestines.—Small intestines congested in places; hemorrhages beneath mucous membrane of descending color.

Gall Bladder.—Filled with dark bile.

Liver.—Nutmeg; small; central vessels dilated; congestion of portal vessels; small amount of fat; small amount of fat at periphery of lobules; connective tissues around portal vessels increased.

MICROSCOPIC EXAMINATION.

Heart.—The cells of the heart are everywhere very fatty; the transverse striæ are wanting, almost entirely.

Liver.—The central vessels are dilated, and the peripheries of the acini are anæmic and fatty; there is bile pigment in the hepatic cells, surrounding the central vessels; there is intense congestion of the intra lobular plexus and atrophy of cells in their neighborhood.

Kidneys.—The connective tissue is increased in places; there is extensive fatty degeneration of the epithelium lining, both the straight and convoluted tubules.

Case 8.—*Tendency to Syncopal Attacks Relieved by Convallaria Majalis.*—A young lady, 22 years of age, single, residing in one of the healthiest situations of New York, came under my care about two years ago for chronic rhinitis. She was pale, anæmic, with considerable local pain over lumbar and lower abdominal region at the time of her menstrual flow. There was no history of constitutional dyscrasia of any kind. Her father and mother and several sisters have always had good health. Her nasal trouble has not improved much, notwithstanding assiduous treatment of the most approved kind, both local and general. Her nutrition, also, appears to remain in about the same imperfect state. During the past two or three months she has been treated by me for obstinate atonic dyspepsia for which her family medical adviser formerly treated her with only moderate success. This winter her dyspepsia has annoyed her as much as previously and accompanying it she has suffered from frequent faint turns. These faint feelings, during which her hands would become icy cold, her pulse almost disappear at the wrist and her face be overspread with deathly pallor, lasted an hour or more. She has been taken suddenly with these attacks in church, at the theatre, in the street, in her own home, sitting, or standing, or even when quietly reposing in bed. At first I examined her urine very carefully and found it, on repeated occasions, in a healthy condition. The heart action was weak, but regular and with no abnormal murmurs. I concluded that the attacks were caused by the condition of the stomach and used many usual remedies to relieve the dyspeptic condition, which I finally succeeded in improving to a marked degree. The faint turns continued as before. I now examined her ears, found impacted cerumen, removed it, and after using Politzer's bag, found by the ordinary tests that her hearing was very good. I now gave five-minim doses of fluid extract convallaria every six hours with a view to stimulating cardiac contractility and thus cure the faint turns. When seen one week after the use of the remedy I found my patient decidedly improved. She had had only one faint turn in the time since my previous visit, although prior to taking convallaria she had an attack resembling syncope almost every day. Her dyspeptic condition was notably improved, and, in fact, she felt altogether better in health, and when I suggested giving up the use of convallaria she objected to it in no uncertain tones.

Upon auscultation of the heart on this occasion I found evident reduplication of the first sound of the heart heard over the entire præcordial area. The heart beats were somewhat more forcible than at a previous examination, but not apparently so much benefited as regards their power, as I should have presumed would be true in considering her much more comfortable condition.

It will be remarked as regards the influence of convallaria on

1.—*Digestive Organs.*—On two occasions I have seen decided nausea and even vomiting follow closely upon the exhibition of the fluid extract of convallaria. Inasmuch as at the time the patient was passing a relatively small quantity of urine of low specific gravity, which contained from 5 to 15 per cent. of albumen, I was not convinced that the convallaria was responsible for the stomachal intolerance, but thought it could be with equal propriety attributed to commencing uræmia, or indeed to simple chronic congestion of the gastric mucous membrane under the dependence of weakened heart power.

2.—*Heart, Pulse, Respiration.*—Whenever the cardiac beats have been very irregular, unequal, or intermittent, I have not seen these conditions much changed even by the exhibition of quite large doses

(10 gtt. every three hours) of convallaria continued for several days at a time. At best all I have remarked after a few days was somewhat greater force of each successive cardiac contraction. I have given it to two patients who accused painful palpitations with the greatest benefit (case 5).* The number of the cardiac beats has been lessened a few beats on several occasions; thus the pulse has fallen from 108 to 96 per minute; but I have only remarked once a rapid and considerable diminution in the cardiac acceleration, (case 7), and this was occasioned, not by giving the drug by the mouth, but by means of hypodermic injection. The case was one of chronic cardiac disorder in which the pulse was beating at the rate of 160 per minute. It was reduced in one hour and a half and by two hypodermic injections, at one-half hour interval, to 80 per minute and with evident relief to the patient. On one occasion it was noted that after each dose of convallaria the patient had a strong desire to sleep (case 4, p. 12) and in fact did sleep for an hour, or more, awaking from it with a decided restful feeling and much quieted by the long needed repose. Whether, however, the convallaria produced this happy result by a direct effect upon the intra-cranial arteries, or whether it lessened those throbbing sensations which, in nervous patients affected with chronic heart disorders, are so apt to cause sleeplessness, I did not at the time determine, and must wait for further opportunities to satisfy myself on this point. It has seemed to me by palpations of the pulse of the patients who were taking frequent doses of convallaria that the pulse beats showed decidedly increased vascular tension. Still no sphygmographic tracings were taken to determine this point with great accuracy. What I can affirm, however, is that while giving convallaria I have never noted any symptoms showing sudden cardiac depression, or failure in its contractile force, such effects, indeed, as have been remarked in experiments upon animals with this drug. There does not appear, therefore, within reasonable limits of doses, to be any risk of producing poisonous effects by its employment. In this respect it has an evident advantage over digitalis, which, as we know, will finish by wearing out heart action and increasing at times the rapidity of the cardiac beats rather than diminishing their number, the effect which we especially wish to accomplish. The cumulative effects, in a word, of convallaria, are not to be feared in man as those of digitalis, and this fact we explain by its rapid elimination from the economy, and probably by the fact that convallaria acts more particularly as a stimulant of the peripheral fibres of the vagi than as an agent which affects directly the cardiac muscular fibre.

3.—*Respiration.*—Convallaria has occasioned more freedom of the respiration—the patients have manifested less anxiety and oppression on account of difficult breathing—than before its exhibition. This it has accomplished in rendering the inspirations slower and more profound.† On one occasion, where I combined the use of convallaria with that of iodide of potassium, I did not see any additional good effect on the ease of breathing caused by the mixture of the two drugs. On the other hand, I was soon obliged to give up this treatment on account of the obvious nausea and vomiting thus occasioned.†

4.—*Diuretic Effects.*—As regards these, I must here separate myself very categorically from the observers who have preceded me. Instead of finding in convallaria the valuable renal stimulant which I had reason to expect from my reading, I found the urine was scarcely or at all increased by its exhibition. Further, no sensible change in the appearance, specific gravity, or composition of the urine, was noted in the patients submitted to this treatment. The œdema of the lower extremities, the serous effusions into the different cavities of the body, of the peritoneum, the pleura, and within the pericardial sac, did not disappear, or even notably diminish whilst it was given. In one remarkable case (Case iv, p. 268), in fact, in which it had been used without the slightest notable good effect in this regard. Infusion of digitalis was then given in ʒ ij doses every two hours, and within three or four days' time, very considerable effusions into the different large cavities of the body had greatly diminished, and the lower limbs, hands and face, instead of being swollen and tense, or merely puffy and softly œdematous, became almost of natural appearance. The urine, meanwhile, from the pint in the twenty-four hour, had increased in quantity to three quarts, and the patient was, as it were, resurrected, so remarkable was the improvement of almost all distressing symptoms. It is just possible that the fact of an evident advanced state of renal degeneration will explain why convallaria failed to increase the urinary secretion in two or more instances where it notably failed to produce any appreciable good results. But this explanation will not suffice for the last case referred to (Case iv, p. 268), since in that instance no albumen was ever present in the urine, nor any deposit which could in any way reveal kidney degeneration of chronic nature. The renal complication, if there were such, could have been nothing more than the chronic congestive condition which so frequently accompanies chronic cardiac disease.

5.—No symptom of poisoning, nor any direct effect upon the central nervous system, has been remarked by me in my use hitherto of convallaria.‡

In concluding this paper, I would suggest a question for solution of very great importance and which, so far as I know, has never been presented before by any writer, except Huchard: Are there not several kinds of asystolie, as there are various remedies which act as tonics of the heart?

Evidently digitalis, convallaria, caffeine, nitroglycerine, have some points of similarity in their manner of influencing heart power and heart structure, but it is, also, apparent even after my own im-

*The other case was one of cardiac dilatation referred to in foot note p. 271.

† This clinical observation does not correspond with that of Smith, in his first case, who says, "that convallaria quickens the breathing;" nor, indeed, with the physiological experiments of Marmé. Ott does not give his conclusions in regard to the respiration.

† This combination was tried on account of the statement of Sée, that in cases in which great dyspnœa was present, it would be found useful.

‡ The preparation given by me was the fluid extract of the root manufactured by Parke, Davis & Co. The doses were usually 5 to 10 gtts. every two, three or four hours in some agreeable menstruum. Once or twice I believe the fl. ext. of the flowers was given. As I am informed, the home-made supply of this latter preparation is for the while almost exhausted. (V. also note of Dr. Hurd in Med. Rec.) It is lighter in color than the fluid extract of the root.

perfect study and comparison of their effects, that they differ considerably. In what these differences consist is at present only known in part, and it will require future study and observation to limit their indications more accurately. Sufficient is already determined, however, to enable me to affirm positively, that as we possess several medicinal agents which have each its special tonic influence over the heart, so we have cases of asystolie which are occasioned in different days, although ultimately giving many physical and rational evidences of a strong likeness between them. Unfortunately, it is not as yet in the power of the most accurate clinical observer to say when one structural cardiac constituent is affected morbidly, and when another. Moreover, it should not be lost sight of that whilst in the first stages of organic heart disease it may be practicable to discover the inter-dependence of the lesions, and to recognize the starting point of the morbid processes, yet in the more advanced period it shall scarcely become possible. When nerves and ganglia, vessels and muscular fibre are all degenerated, it would be almost folly to affirm that in this or that change of elementary structure we had found the cause of the symptoms presented. But before the final stage and during a long period when cardiac rhythm is much affected, when the pulse is unequal, irregular and intermittent, when the urinary secretion is deficient, and general anasarca, more or less developed, with dyspnœa of variable amount prevails, we may hope that distinguishing features may yet be described which will permit of accurate differential diagnosis. I am personally convinced, even at this time, that some cases of asystolie hitherto considered as due to fatty degeneration of the cardiac walls are mainly the result of incoördinate or insufficient action on the part of one, or more of the nerve structures governing the heart. It may be the vagi, the sympathetic, the cardiac ganglia, which are implicated specially, and as one or other is primarily diseased, so our cardiac symptoms and signs may differ in a measure, only in what this difference consists precisely, we have not hitherto discovered. Again, the entire action of a heart affected with "asystolie" may be controlled by vascular changes, and if we knew how and when to recognize this fact, we should have good reason for giving a therapeutic agent distinct from the one employed for other affections of an analogous, though in reality, separate kind. Some one may urge in reply to this statement that it is hardly possible to be deceived as to the efficient causes of symptoms presented during life, when at the autopsy one finds dilated heart cavities and fatty degeneration of the muscular fibres. I reply that, of course, such instances are frequent, and were it not that in them I recognize a final stage of several different primary changes, I should find it impossible to offer a solution. But let it be remembered that, at times, cardiac cavities are only moderately dilated, without the slightest accompanying fatty change of the muscular fibres, and yet previous to death we have had many familiar signs of asystolie. The autopsy, if carefully made, may or may not afford us a plausible explanation of a curious fact. I feel assured, however, of one thing, viz., that only when pathological researches shall have revealed in all doubtful cases, the intimate morbid alterations of the nerve trunks and ganglia, controlling cardiac action, shall we be able to affirm that there is or is not an actual lesion to explain the symptoms during life. Even if anatomical investigation should ultimately prove insufficient, there may still be some work in the direction of pathological chemistry, especially in the analysis of the solids or fluids of the economy, through which obscure matters will gradually become lucid. In order to show that something already has been acquired to our knowlegde of facts pertaining to the elective action of drugs which should be known as "cardio-vascular drugs and poisons,"* I have copied the following tabulated statement which belongs to Germain Sée, and will now read to you:

1. *Cardiac Muscle.*—Stimulation by digitalin, iodine in small doses, camphor, caffeine; paralysis by digitalin in the second period of action, emetin, salts of copper, barium and potassium, chloral in large doses, scillain.

2. *Intra Cardiac Muscular Motor Centres.*—Stimulation by ——— not mentioned; paralysis by saponin in its last period of action, iodine in large doses.

3. *Intra Cardiac Inhibitory Centres.*—Stimulation by muscarine; paralysis by atropine, fabarine, sperteine in large doses.

4. *Intra Cardiac Ramifications of the Inhibitory Filaments of the Vagus Nerve.*—Stimulation by nicotine, pilocarpine, calabar bean; paralysis by pilocarpine, second phase of action.

5. *Trunk of the Vagus Nerve.*—Stimulation by aconite, napelline; paralysis by sparteine; napelline, second phase of action.

6. *Accelerator Filaments of the Great Sympathetic.*—Stimulation by apomorphine; paralysis by sparteine.

7. *Medullary Inhibitory Centres.*—Stimulation by digitalin; paralysis by chloral.

8. *Vaso-Motor Centres.*—Stimulation by bromide of potassium; paralysis by croton chloral; hydrocyanic acid.

In this long list it will be remarked there is no mention of convallaria, but as we are aware already, it may be properly approximated, at least so far as our actual knowledge extends, with digitalin; it is possibly, therefore, a simulator of the cardiac muscle in its first period of action, whilst its after effects may become of a paralytic order. Further, it is, after the manner of digitalin, a stimulator of the medullary inhibitory centres. It is no doubt, in this latter action, that resides its special power to control dyspnœa and the symptoms of purely functional heart disorder, particularly paroxysmal palpitation and rapid and irregular heart-action dependent upon debility (Trideau).

To this I would add, it is probable that convallaria majalis is more potent in its action upon the pneumogastric trunks than it is in its direct influence over the cardiac muscular fibres. This appears to me a fair deduction from what I have noticed with respect to its action in my cases. In regard to caffeine, I am of opinion that it is mainly through its elective action upon granular renal epithelium, which it stimulates in a remarkable degree, when it is in a healthy state, that it strengthens, indirectly, cardiac contractility. In addition, it contributes to this result, by a moderate, stimulating action upon the different sources of nerve supply of the heart.

In terminating this clinical study of the action and

*New Jersey Medical Journal, March 10, 1883, p. 279.

uses of caffeine and convallaria, I am led to ask, with a late writer, why it is that neither it nor experimental physiology has yet yielded the fruits which might have been expected from them, in regard to the elective action which certain therapeutic, or toxic substances from the vegetable kingdom, exercise on one or the other parts of the apparatus of cardiac innervation.

As it has been stated elsewhere, there are probably two special reasons which may serve to explain this.* The first lies in the complexity of the composition of these alkaloids, *i. e.*, aconitine, digitalin, pilocarpine, which probably contain many distinct active principles, possessing absolutely dissimilar pharmacodynamic properties. The second is, that the localization of the effects of the same agent varies with the doses and duration of the experiment, *i. e.*, effects of the drug are described without indicating the precise circumstances under which they were produced.

"Moreover, these primitive and specific effects of a drug on a certain part of the apparatus of the innervation of the heart, may be masked or interfered with by the energetic effects of the same agent on other systems."

Summary of Cases Seems to Show.—1. In caffeine and convallaria we have two efficient heart tonics.

2. Diuretic action of caffeine is more marked than that of convallaria.

3. Convallaria is well borne by the stomach of most patients suffering with chronic cardiac disorders.

4. When not well supported, rejection of medicine by the stomach is probably due to the uræmic condition already commencing.

5. As cardiac tonics it is difficult, as yet, to assign a decided superiority to either of these drugs, they both giving increased cardiac power.

6. Cumulative effects do not occur from their continued use during a period of ten days or more.

7. Their power of restoring the rhythm to the cardiac pulsations, and increasing the bulk of urine, is not equal to that of the infusion of digitalis.

8. In this latter drug we have still the most efficient heart tonic and regulator which has been discovered.

9. Digitalis is a more powerful diuretic than caffeine.

*The British Medical Journal, February 17, 1883, p. 319-20.

Yerba Reuma in Catarrh.

By F. C. Herr, M. D., S. W. Hospital, Philadelphia, Pa.

A CONSIDERABLE experience with the use of yerba reuma in the treatment of acute, subacute and chronic catarrhal affections of the naso-pharyngeal mucous membrane has, in my judgment, established its claim to a high rank in the category of anti-blenorrhœal remedies. Every medical practitioner is familiar with the refractory nature of these catarrhal processes, and I do not fear contradiction when I say that upon no rock have so many professional hopes been shattered as upon this. Where is the physician who has not exhausted his skill and resources in vain endeavors to eradicate this hydra-headed disease—catarrh? Where is the adventurous charlatan who has not filled his coffers from the same source, not by reason of the good accomplished, but on the insubstantial basis of blatant promises and wicked misrepresentation. I have conscientiously tried many, many drugs and methods in the management of these catarrhal affections—sometimes with beneficial results, more often with half-cures or no cures at all. I have sought to imitate the practice of Dr. Morell Mackenzie, of the London Throat Hospital, in these conditions, but with varying success. Never, until I introduced into my materia medica this new agent, did I have that uniformly good result which we all so much seek, and I am happy that I can administer yerba reuma in all stages and degrees of catarrhal disease of the naso-pharyngeal mucous membrane with confidence in its power to heal and to cure. Sometimes these affections of the mucous membrane bear the relation of effect to a condition of systemic vice, which requires to be corrected before the localized disorder can be removed. Here yerba reuma would fail of its usually curative action. It would (as I have more than once seen) modify the local disease even here; but its external use must be conjoined with the internal administration of remedies to meet the indications of the constitutional disorder. My experience would warrant the assertion that yerba reuma will cure almost every case of nasal catarrh where no complication exists. It is little less beneficial in catarrh of the fauces and pharynx. My usual method of administration is this: I cleanse the mucous surfaces with injections (where this is possible) of simple warm water, in order that the medicine may be brought into direct contact with the diseased membrane. This done, I have the patient snuff one part of fluid extract yerba reuma, diluted with an equal quantity of pure water, up the nostril twice daily: or, instead of this method, which I do not consider the best, I use the nasal douche. This method of treatment has limited utility, but where it is practicable the beneficial results are prompt and pronounced. The method of inhalation is more serviceable in the treatment of broncho-pulmonary mucous membranes, and should always be employed. For the treatment of faucial and pharyngeal mucous membranes the ordinary method of gargling is highly serviceable. Added to the method of atomization, nothing is needed to successfully treat these usually stubborn affections. I have now under treatment at the Southwestern Hospital several cases of naso-pharyngeal catarrh, in which very appreciable benefit has followed the internal administration of fluid extract of yerba reuma. I give ten minims, diluted in water, three times daily, and enjoin a rigidly abstemious diet. Care is taken that the excretory and secretory functions are generally well performed. I have reason to believe, from the good already achieved in these cases, that an ultimate cure, complete in its character, will result from the exclusive internal administration of the drug. The chemical composition of yerba reuma would support the hypothesis of its utility when administered internally, and I have no question that its limit of usefulness will be much extended in this direction by future experimentation.

From a very limited experience with yerba reuma in the treatment of ophthalmia neonatorum, I may say it possesses a controlling influence over the milder types of this affection. In those cases in which promptness and energy of action are demanded it must yield to more efficient agents.

In simple inflammation of the conjunctival mucous

membrane, frequently repeated applications of fluid extract yerba reuma will effect a speedy cure. I have used it in this condition a number of times with curative results, and shall, as opportunity offers, continue this line of experimentation. In the range of therapeutic application which I have made of yerba reuma it has been found efficient and reliable, especially so in catarrhal inflammation of the naso-pharyngeal mucous membrane. At the Southwestern Hospital I employ it to the exclusion of almost every other agent in the treatment of these affections. It is not uncertain or capricious in its action. It will not disappoint physician or patient. Its use must be persisted in with confidence in its power to heal, and the result will generally cause rejoicing. I will append the history of a few cases of naso-pharyngeal catarrh treated with yerba reuma, and the results of treatment:

January 20, of the current year, Miss D., æt. 26, applied at the Southwestern Hospital for treatment. In her childhood she had been a sufferer from scarlet fever, and she now places the responsibility of a once most distressing nasal catarrh upon that disease. I do not doubt the correctness of her opinion. However, for many years she could breathe with the utmost difficulty through her nostrils, and was harrassed with a persistent hawking and expectoration. A proper regimen was prescribed, and dilute applications of fluid extract yerba reuma made to the anterior and posterior nares, by means of the nasal douche, once daily. The pharyngeal trouble was treated by the method of inhalation. Both, in their respective fields, secured desired results. The patient is well, free entirely from any of the symptoms which characterized the catarrhal affections. For inhalation in this case I employed ext. yerba reuma fld., ℥ ij.; aqua dest., ℥ jv.; mixed, and inhaled fifteen minutes at each sitting through steam atomizer.

Case number two was a lad twelve years of age. For several years he had had nasal catarrh in an aggravated form. I began the treatment of this case with applications made with the nasal douche, but I was required to desist from this as the patient could not use the douche. Injections of one part ext. yerba reuma fld. and three parts aqua dest. were substituted, and continued until a cure was effected. I have seldom discontinued treatment in less than three months.

At the same time that the above case applied for treatment, another lad of fifteen years came to the hospital and sought our aid. With the same history and the same symptoms as in the preceding case, we were not slow to direct similar treatment, and in due time a gratifying result was accomplished.

In my private practice I treated a most obstinate case of chronic catarrh of the faucial and pharyngeal mucous membranes with inhalations of yerba reuma. In this patient the symptoms marked an extreme case. The disease had pursued a protracted course. The fauces, pharynx, epiglottis and superior portion of the larynx, including the vocal chords, were involved. The patient's voice was feeble and altered. Hawking of thick, viscid mucus and muco-pus was distressing. During a period of four months inhalations and gargles of yerba reuma were continued at regular intervals with ultimate lasting benefit. At times it seemed that nothing would come of it; but finally, after many improvements and relapses, lasting good was wrought, though I cannot claim for this case a perfect cure. Indeed, a perfect cure was impossible in the case, as the protracted history of the disease and its aggravated nature had wrought changes of a hyperplastic character, that neither yerba reuma nor any other agent could remove.

In all of these cases I used *only* the fluid extract of yerba reuma. I could add to the list many more similar examples of the efficacy of this drug. In a very few instances it has failed. This I attributed more to the neglect and indifference of the patient than to inefficiency in the drug. It is not always possible, either in dispensary or private practice, to conduct experiments with that conformity to scientific accuracy which we may desire. Incidental conditions (both within and without), over which we have no control, cannot be deprived of some influence in modifying the effects of treatment; so that the best results we achieve with a drug, I take it, are only an approach to the more perfect action which would be secured under fixed and unvarying conditions in and about the patient.

Reports on New Remedies.

From Private Practice.

Arbor Vitæ (Thuya Occidentalis) in Spermatorrhœa.

By H. C. Noble, M. D., Clyde, Ohio.

NOTICING the several articles you have published in regard to the operation of thuya occidentalis in cancer I have concluded to write you my experience with the drug in another class of cases, namely: nocturnal emissions, exhausted vitality, spermatorrhœa, etc. I have used the remedy in these cases for the past eight years with the most flattering success. I am indebted to a homœopathic physician for having my attention called to thuya in these cases; knowing his success with it I was led to give it a trial. Have used it in about thirty cases and it has failed me in only one case. Will give you history of two or three cases which are a fair illustration of the whole:

No. 1. Mr. N., æt. 23, student of dentistry; cause of trouble, masturbation. Had not masturbated for one year; had been under treatment for three months and health gradually failing; was very much prostrated, so much so that he had to give up work; very nervous; digestion poor. Had troublesome cough and imagined he was going into consumption. When he came to me was having from four to six nocturnal emissions a week and was in a deplorable condition mentally. I prescribed homœopathic mother tincture thuya in doses of five drops three times a day, and cool sponge bath on going to bed at night. For his indigestion gave him pepsin and bismuth sub. nit., each grains five before each meal. Assured him this case was not a serious one, which had a good effect upon his mind. For first week could see no change; second week had three emissions; third had none, appetite and digestion much improved; fourth week two emissions; fifth and sixth weeks none, cough had ceased altogether and general health very much improved, and at the end of two months seemed perfectly cured and the disease has never returned.

Another case, Mr. J., spinner, in a woollen mill,

æt. about 30, rather below the average of intelligence and had become a monomaniac over his trouble; had been in the habit of procuring and reading every quackish article pertaining to his condition which he could see advertised, and had been shamefully victimized by these unscrupulous quacks, but had never employed a regular physician. He had been addicted to excessive masturbation, but had stopped the practice and was making a strong effort to reform. For some time after he had stopped the practice he had been the victim of lascivious dreams and night pollutions, and for the past two months had but little control of himself in the day time, often having an emission when at stool. I treated him with two-drop doses of mother homœopathic tr. thuya, given every three hours. Directed cold sponge bath on going to bed, and as many times during the night as he should awake. In addition, gave him three-grain doses each of citrate of iron and quinia, three times daily, at the same time giving him such assurance and advice as would quiet his fears and gain his confidence, which I consider very important in these cases. I am particular upon this point in the management of all such cases, as well as the employment of the usual hygienic measures recommended in their treatment. The improvement in this case at first was quite slow, but at the end of the first month was well-marked and continued uninterrupted until the end of about four months, when I discharged him in good spirits and good health. I might report other cases, but will not take the space.

In mild cases of nocturnal emissions I have known them to cease after the first week of administering the medicine and speedily recover. I can truly say I have never seen so marked effects from any other treatment in these cases as from the thuya occidentalis.

In the case in which I failed I could get no moral control of the patient. I have never had any experience with thuya occidentalis in any other class of cases.

Grindelia Robusta.—Piscidia Erythrina.—Witch Hazel (Hamamelis).

By Justyn Geo. D. Douglas, Tantallon, Bournemouth, Eng.

GRINDELIA ROBUSTA.—I have tried the above new remedy in several cases of asthma. It will be, in my opinion, found most useful in cases more or less associated with bronchitis. In addition to its sedative properties it possesses a decided expectorant action.

The following case attended by out-patient department of the Bournemouth Dispensary, viz.: Stephen C., æt. 51 years, an upholsterer, has been subject to colds and coughs for last six years, and spent one winter as in-patient at Brompton Hospital. Present attack has lasted one month, characterized by great difficulty of expectoration and breathlessness, which symptoms are greatly exaggerated at night and prevent him lying down. Loud wheezing rhonchi and râles are heard all over his chest. Face has depressed appearance and rather livid look. Pulse small and weak. Had been taking various sedative and other medicines without much effect. Ordered him, August 26th, 1882: fluid ext. grindelia. S. ℥i every four hours. He persisted in its use and it had wonderfully good effects. Described it as first causing a warm sensation and some slight pain, followed by forcing expectoration and very great relief. My notes a week afterwards: Patient has slept well since taking medicine and asked if he might have it repeated.

I have not found the drug so useful in pure spasmodic asthma, but that complaint is at all times so capricious. In the chronic bronchitis of old people I should think it would prove well worthy of trial.

Extract Piscidia Erythrina.—The above will be found useful in cases accompanied by irritating and spasmodic cough. The properties are anodyne and one great advantage is that the drug does not appear to constipate. I have used it in two cases of irritable cough accompanying third stage of phthisis. The patients were ordered 30 drops on pieces of sugar to suck, and both were relieved by it, though one complained of slight nausea on taking the drug. In neither case did it cause headache or constipation as a similar dose of opium would undoubtedly have done.

Compound Extract of Witch Hazel.—This diluted with half its bulk of water, will be found useful in cases of hæmorrhoids and all bruised or abraded surfaces. I have found it very unirritating; it has a mild, soothing effect, at the same time acting as a powerful astringent. The best mode is to soak a piece of absorbent wool in the preparation made as above and apply it continually.

In one or two cases of hæmoptysis it seemed to exert a slight influence, and in the proportion of one to six of water it forms a pleasant collyrium in simple cases of conjunctivitis.

Eucalyptus Globulus in Diphtheria—Kava Kava in Enuresis.

By C. N. Palmer, M. D., Lockport, N. Y.

I WISH to call the attention of the profession to a more extensive use of eucalyptus (fluid extract) in the treatment of diphtheria. I have used it as a topical application in this disease for the past five years with steadily increasing confidence.

In severe cases the undiluted fluid extract may and should be employed. In milder cases, or as convalescence advances, diluted with an equal amount of glycerine, or even glycerine in excess.

It destroys all odor, facilitates the detachment of the deposit, disintegrating it, if not too leathery in character, and frequently preventing secondary formation.

With its continued use and the thorough disinfection of all receptacles containing expectorated matter, I have never yet seen a case of infection in others exposed to the patient.

I do not discover anything which leads me to believe eucalyptus to have any specific action upon diphtheria except by its local action, but in that respect it seems to be all that could be expected or desired.

My general treatment is very simple. Stimulants to support the patient, regardless of quantity, with tincture of iron, and later, quinine in moderately full doses, and strongly supportive diet.

My use of eucalyptus as above stated covers upwards of one hundred cases, positively diphtheritic in character, and I find that it helps out wonderfully.

It should be applied upon a clean swab every two or three hours. Try it and report.

Did you ever meet with signal failure in attempts to control nocturnal incontinence? If so and you are stumped again, try fluid extract kava kava in full doses. I have succeeded with it in six cases where all ordinary remedies failed me. I have never heard of its being used for that purpose by any other practitioner, hence the publication of results in my hands. I think the results more rapid when it is combined with belladonna, but the cases I mention had been put thoroughly under the influence of belladonna *alone* without benefit, previous to the exhibition of kava kava. In all these cases no general or hygienic means were neglected, and I am satisfied that without specific restraints and precautions, no medicinal agent can reasonably be relied upon to break up the habit. But I am inclined to believe that when administered intelligently, we have in kava kava a useful aid in keeping beds dry.

Aletris Farinosa as a Uterine Tonic.

By D. P. Duncan, M. D., Waynesboro, Ga.

IN our last United States Dispensatory I find aletris farinosa among the non-officinal remedies. I am surprised at this. It is spoken of as simply a bitter tonic; in large doses a cathartic and emetic. Our compilers, it seems to me, should be governed to a certain extent by the observation and experience of men capable of judging of the merits of medicines in given cases. I say it without fear of successful contradiction, that aletris farinosa stands unrivalled as a uterine tonic. I have used it in irregular, painful, suppressed and excessive menstruation and have yet to see one single failure. Dr. Johnson, my former partner, and myself used last year at least one gallon of the tincture and so far have succeeded in every case in relieving the applicant. Again, when the womb has aborted for years successively, its continuous use has carried cases through the full period of gestation. In two or three cases, where from some irregularity the woman had failed to conceive in periods from 5 to 15 years, its use has enabled each case to conceive and give birth to hale, hearty children.

I trust other professional friends will experiment with this most valuable of all agents for restoring normal action upon the part of the uterus, and I will guarantee no failure where properly applicable and administered correctly. The dose is 10 minims three times daily for from one to three months, and I have even known it administered continuously during entire gestation. I should feel completely lost without it. It is true that black haw will as surely prevent abortion, but it fails to meet all the indications in cases where it is difficult to find the cause of any abnormality. The aletris here comes to the rescue, to the relief of the patient and the entire satisfaction of the practitioner.

Cascara Amarga.

By A. G. Bruce, M. D., Albion, Mich.

MR. F., salesman in a wholesale house in Detroit, contracted syphilis in May, 1881; was treated by two Detroit physicians for six weeks. Called on me August 1st, 1881. I found primary sore about the size of a thumb nail, on penis, tenderness and enlargement of inguinal glands. Applied dry calomel to sore. Compound cathartic pills, one every night. Fluid extract cascara amarga, ℥ jv. Sig. Teaspoonful before meals. Patient returned in six days. Sore healed and glands less tender. Gave him one pound fluid extract cascara amarga and directed him to take as before until the whole was taken. It is now nearly two years and he has never had any further secondary symptoms.

Case 2.—Mr. M., traveling salesman for Detroit wholesale house. Contracted syphilis several months ago. Had small sore which was cauterized and healed at once. Has had ulceration of throat for four or five months, for which he has tried many things from several physicians. Called on me May 26th, 1883. I prescribed:

℞ Fl. ext. cascara amarga, ℥ vj.
Fl. ext. berberis aq., ℥ jv.
Fl. ext. sarsaparilla, ℥ ij.

M. Sig. Teaspoonful before meals.

Also

℞ Fl. ext. belladonna, ℥ j.
Fl. ext. calendula fol., ℥ ij.
Fl. ext. hydrastis, ℥ j.
Hamamelis distilled, q. s., ad., ℥ viij.

M. and filter. Sig. Put teaspoonful of this in a little water and gargle throat morning and evening. June 12th I received the following note from him: "Send me some more medicine to Detroit. Mouth and throat seem to getting about well."

A Singular Effect of Cascara Sagrada.

By E. A. Herig, M. D., Saginaw, Mich.

CASCARA SAGRADA.—Having tested this remedy for the last three years, frequently, in all cases of constipation of a chronic character I am well satisfied with it. It has always had the desired effect except in one case, that of a young, robust man, who took it for a week, in whom it entirely failed.

Recently a very peculiar effect of this drug was observed by me. A few months ago I prescribed the fluid extract cascara sagrada for a boy of fourteen, with the usual good result. The boy's father, a strong man of about 38 years of age, healthy, but sometimes suffering with headache in the frontal part of the head, gave the medicine a trial also for relieving his constipated bowels, and found it suitable. After having used it for a couple of weeks he found difficulty in urinating. Every time then in voiding his water he had to wait a minute or so and press before the urine would flow, and then coming first in drops only, but soon in full stream. No pain in urethra or region of bladder was noticed. Urine was examined; free from albumen and sugar. I ordered him to stop the use of the cascara sagrada, and within two weeks the trouble had disappeared, but it returned as soon as he took the medicine for a few days again. Now, having since several weeks quit the use of the drug, he is perfectly free from any of the described symptoms.

Has any other physician made a similar observation?

Stigmata Maidis in Acute Cystitis.

By Wm. H. Rush, M. D., U. S. N.

A. B., æt. 37, a native of Illinois. Has always been healthy, and is now robust, Has suffered from several attacks gonorrhœa, and has now a gleet with a forming stricture. Has had occasional attacks of irritation of the neck of bladder, producing dysuria, great pain over pubes and following urination, a few drops of blood. Was given 4 c. c. of fld. ex. stigmata maidis (P. D. & Co.) every two hours; flaxseed tea, and hot compresses over the pubes. The following morning reported much better, and internal treatment continued; and, by evening all symptoms had subsided.

Translations.

[All articles signed "T" are translated for The Therapeutic Gazette by C. W. Tangeman, M. D., Cincinnati.

On the Treatment of Chorea.*

Gentlemen—From the standpoint of therapeutics, what distinguishes chorea from the other neuroses which we have been considering, is its spontaneous march toward recovery. This is a fact of capital importance and has a preponderant bearing on the discussion in which we are about to enter.

Chorea in fact presents, like all the cyclical diseases, a period of increase or "augment," a stationary period, "fastigium," and a period of decline; it passes through all these stages in an average time of from two to three months, and you well understand that this spontaneous tendency toward cure modifies the results obtained by an appropriate treatment, according as such treatment is instituted at the beginning or decline of the disease. Therefore, whenever you would appreciate the value of any kind of internal medication directed against chorea you should base your judgment, not on the duration of the treatment, but on the entire duration of the disease; and when the latter corresponds pretty closely with the normal and spontaneous evolution of the malady, you may conclude that the medicine has been of little utility.

From such considerations, moreover, we ought utterly to abjure all violent modes of treatment, which may become dangerous by the troubles which they are likely to occasion in the organism. Death is fortunately rare in chorea, but does sometimes happen in consequence of excoriations produced by the disorderly movements of the child.

What I have to say on this occasion will concern true chorea, that ordinary form of motor incoördination which affects childhood and develops, as Sée and Roger have shown, under the influence of rheumatism. I leave, then, completely to one side those symptomatic choreas and all those disorders of movement which have been described under the name of "St. Wyt's dance" (dancing chorea), and all those partial choreas and rhythmical twitchings of muscles which are referred to athetosis, disseminated sclerosis, to paralysis agitans or simple nervous debility.

The causes of chorea are predisposing and determining. Among the first are age, sex and heredity. The disease, rare in warm climates, is more frequent in winter than in summer. It is observed between the ages of eleven and twenty, rarely between thirty-five and fifty, and occasionally in advanced life. It is much more frequent at the age of second dentition, or at the period of puberty. It is also more frequent in females than in males. Heredity plays an important part. Children inherit this neurosis from choreic parents, or it may be that epilepsy, hysteria, etc., are family diseases. Venereal excesses and masturbation predispose to chorea.

The determining causes are numerous: Strong emotions, fright, anger, may produce it. It is sometimes seen in the course of a protracted fever, or during convalescence. Pregnancy, menstrual irregularities, uterine affections, are causes of chorea.

Among the most powerful causes are articular rheumatism, endo-pericarditis, intestinal worms and anæmia.

The relation of rheumatism to chorea has long been noted. In France it has been studied by Germain, Sée and H. Roger, who consider chorea a rheumatic affection. This opinion has been vehemently combated by Grisolle, Graves, Niemeyer and others. According to Professor Sée the coincidence of chorea and rheumatism is so striking that out of every two children affected with rheumatism, one of them becomes choreic. Roger also has shown that chorea manifests itself often in children who have had rheumatism; and that it accompanies or immediately succeeds that disease.

Its existence frequently coincides with the cardiac affections of rheumatism (endocarditis, pericarditis). Certain authorities consider the cardiac lesions as the point of departure of the neurosis. Bright and Cyon think that it is due to irritation of the nerves of the heart. Hughlings Jackson and Tuckwell trace its origin to cerebral embolisms caused by a preëxisting endocarditis; the embolic infarctions being in the corpus striatum.

Like every disease which tends of itself toward recovery, chorea has received a variety of treatments; it has been natural to attribute to the medicine given the cure which one has observed. Therefore, in order to give system to the details into which I am about to enter, I shall have to range these treatments in different classes, and we will study them under four heads.

In the first group we shall examine muscular medicaments. Struck by the ataxia of movements characterizing the disease, certain physicians have essayed to cure chorea by means absolutely opposite; one class of remedies augmenting muscular contractility, like strychnia and aniline, another destroying it, like eserine and curare.

In the second group we place medicaments addressed directly to the spinal cord. Although the latest researches have attributed to a cerebral origin the clonic movements which are observed in chorea, a preponderating rôle in the production of this neurosis has always been assigned to the spinal cord and its membranes, and authorities have even gone so far as to pretend that it was only the result of a rheumatic affection of this part of the cerebro-spinal axis. You will not then be astonished to learn that medicines addressed particularly to this supposed medullary affection have been recommended, such as

*By Professor Dujardin Beaumetz, Physician to the Hôpital St. Antoine; Member of the Academy of Medecine, Paris, France. Delivered in the Hôpital St. Antoine and translated from advance sheets for the Therapeutic Gazette by E. P. Hurd, M. D., Newburyport, Mass.

bromide of potassium, oxide of zinc, the ether spray and applications of ice along the spinal column.

It is upon an altogether different basis that is established our third class of medicaments. Noting that sleep arrests choreic movements, some have thought that by artificially inducing sleep, they might stop the muscular disorder. Therefore chorea has been treated by soporifics, such as opium, chloroform and chloral.

Finally, in a fourth and last group, I place those medicaments which are directed to the state of the vital forces, and here, as in the case of the first class, we have two kinds of treatment diametrically opposed; in the one are the depressants, such as tartrate of antimony; in the other tonics, such as arsenic, hydrotherapy, sulphur baths and gymnastics.

Let us examine the first of these groups, the muscular medicaments. In this group we have the tetanizers and the paralyzers of muscles. It was Trousseau who first brought into vogue the treatment of chorea by strychnia, though this drug had previously been employed by Lejeune, Neumann and Cazenave of Bordeaux. Trousseau prescribed very large doses of strychnia, giving five and even ten centigrams of strychnia daily (from one to two grains) to choreic patients, and determining tetanic contractures of the masseters. Despite the support which West has quite recently given to this treatment, and the favorable results cited by Lacaze Duthiers and others, notably by Hammond in America, I have not seen any benefit from such heroic medication, and cannot advise it, being persuaded of its inefficacy and its danger.*

I must say the same of aniline, which is, as you know, a convulsivant poison, which Turnbull, Filiberti and Frazer have employed in chorea.

By the side of these convulsivant medicines I must place those which have an opposite action, namely, the paralyzers of muscle. I shall pass by curare and curarine, which have been employed by Drummond, Day and Fulton, remedies whose utility in chorea is still *sub judice*,† and shall make brief mention of the alkaloid of Calabar bean.

Eserine has been recommended in the treatment of chorea by Bouchut. It is to him that we owe the greatest number of observations, some 437 cases of chorea having been treated with eserine by this practioner. Despite the advantageous results claimed for this method, since, according to Bouchat, an average of eight days of treatment suffices in the majority of cases for a cure, this medication has not been received with favor, and I know of no one at the present day who employs it. It is, in fact, a dangerous treatment, nausea and symptoms of paralysis of the diaphragm following the absorption of this alkaloid; and, although no grave accident was observed in the cases reported by Bouchut, serious evil is likely to result from the use of this powerful toxic agent.

These same dangers attend the use of hyoscyamine, the favorable effects of which in the treatment of tremblings in general, and of chorea in particular, Oulmont has taught us. The danger results chiefly from the unreliability of the preparation; there exist in fact, in commerce, hyoscyamines of variable intensity, and one obtains different effects according as he uses the preparations of different pharmacists. Recently, at the Societé des Hôpitaux, our colleague Empis reported grave toxic symptoms following doses of 5 milligrams of hyoscyamine.*

All these alkloids, whose action is so energetic, ought to be discarded in chorea, for the risk attending their use is out of proportion to the problematical benefit derived from them, in the case of a disease which runs a definite course, with predominating tendencies toward recovery.

Our second class of medicaments is constituted of those which are addressed particularly to the spinal cord, whose excito-motor power they diminish. At their head is placed bromide of potassium, a precious medicament, which we have already seen employed with so much success in the treatment of epilepsy and hysteria. It has also found a place in the treatment of chorea, and Kohn has shown us what we may expect from the bromide in this affection.†

For my part, I believe that it is in the hysterical choreas that the bromide treatment does the most good. You know, in fact, that chorea is often a manifestation of hysteria, and the happy influence of the bromide in these cases is easily understood. In the chorea of children, however, the bromide is very far from being as efficacious, and, notwithstanding the facts presented by Gubler, Gallard, Hough, Worms and Tarchetti, I share the opinion expressed by Ziemssen, Steiner and Dally, and believe that bromide of potassium is not of utility in ordinary chorea, unless, indeed, administered in doses sufficient to produce bromism, and here the disadvantages are out of proportion to the advantages derived.

In England and the United States sulphate of zinc is much used in the treatment of chorea. Barlow at

*Instead of translating a long foot note of the author giving the French method of giving strychnia, popularized by Trousseau, I present Hammond's method, from his Treatise on Nervous Diseases. He makes a solution of strychnia one-half the strength of the liquor strychniæ of the P. Br.; thus: ℞ Strychniæ, gr. j.; aquæ, ʒss. Dose, 5 drops t. i. d. to a child from ten to fifteen years of age. The dose should be increased by one drop daily till the physiological effects of the medicine are manifested, as evidenced by stiffness of the legs and neck. When this takes place the dose should be reduced to five drops and increased as before. TRANS.

†In the London Lancet (reprint) for 1879, p. 352, is an interesting report of cases treated in the Samaritan Hospital by hypodermic injections of curare (service of Dr. Day). One-sixtieth, one-fortieth, then one-tenth of a grain, daily, was injected. The latter dose calmed and improved the patient in every way for thirty hours. Dr. Day followed up the benefit derived by giving sulphate of zinc, 3 grains, t. i. d. Dr. Drummond, of Newcastle-on-Tyne, had previously treated and cured an obstinate case of chorea by the subcutaneous injection of curare. (British Medical Journal, June 15, 1878, p. 857.) The curare was in small square discs of 1-60th grain, prepared by Savory & Moore; these discs were soluble in three or four drops of water. Dr. Day remarks that chorea, which has hitherto been regarded as a spinal disease, seems, in consequence of the association of mouth movements with movements of the limbs, to have a decided cerebral aspect. The experiments of Hitzig and of Ferrier show that the centres for movements of the mouth and limbs lie close together in the motor area of the brain. The hypothesis then suggests itself that chorea may be the result of a rippling discharge from the motor centres lying around the fissure of Rolando. The possibility that this may be the case renders the therapeutics of this affection still unsettled and unsatisfactory.—TRANSL.

*Oulmont. Treatment of Chorea by Hyoscyamine. (Bull. de Ther., 1875, p. 145.) He obtained favorable results in five cases. He administers hyoscyamine in pill form (one milligram), giving three, four or more, but never exceeding ten pills a day, till symptoms of improvement appear. See also Brochin, Treatment of Chorea by Hyoscyamine, in Gaz. des Hôp, 1875, p. 1011.

†Kohn. Treatment of Chorea by Bromides in large doses. (Thèse de Paris, June, 1870.) He cites ten recoveries under bromide. He insists on large doses, six to eight grammes (90 to 120 grains) a day. He pretends that these large doses have no injurious effect.

Guy's Hospital, West and Butlin, in England, and Hammond, of New York, speak highly of this medicament, which is given in doses of a grain or two, gradually increased till as much as fifteen or twenty grains are taken three times a day. As this salt is very irritating to the stomach, it has been proposed to give it largely diluted.*

In France we rarely use this medicament, which in many points bears a resemblance to internal metallotherapy; and just as to the treatment of certain hysterical symptoms it has been of late customary to apply magnets and metallic armatures, so also it has been proposed to treat chorea by this method, and Burq, in 1859, reported cases of St. Vitus' dance cured by metallotherapy. I refer to these facts without comment, for they are not yet sufficiently numerous to warrant us in drawing conclusions from them as to the utility of metallotherapy, or even of zinc sulphate in chorea.†

Picrotoxine, which we have already seen used in epilepsy by Planat, has also been tried in chorea; but these are trials which have not been repeated. I may say the same of nitrite of amyl, employed by Winfield-Ziegler.

Electricity has been made use of under two forms, as galvanism and as galvanic baths. Remak and Onimus have recommended constant currents, applied along the spine; these, which ought to be descending currents, according to Onimus, diminish sensibly the motor incoördination and the duration of the disease.

Constantine Paul has eulogized the galvanic baths, which, if they do not give very positive results in chorea, seem at least to modify in a happy manner choreas of long standing, and choreic tremblings. You ought then to know how to give these baths, whose practical application is very simple. The electric bath is composed of three parts: a bath-tub, a battery, and an electric coil. The bath-tub ought to be insulated, and should rest on glass legs, or its inner surface should have an enamel coating of glass or some other non-conductor. The battery consists of a single Bunsen cell; as for the helix, it is furnished with an interrupter and a graduator which enable you to increase or diminish the intensity of the current; it is constituted by a single wire sixty metres long and three millimetres in diameter. This is the way you manage this apparatus: The positive and negative poles of the battery communicate with the helix; then after having formed part of the coil, they terminate in two stops destined to receive two other wires. These last terminate in the bathing-tub, the one at the foot, the other near the head; they end in two carbon plates which are fixed to the two extremities of the tub. The tub being filled with water at a temperature of 35° to 37° C. (95° to 98° F.), the patient immerses himself in the water, with his back against the carbon plate where ends the negative pole, while his feet rest on the plate that represents the positive pole. Then the current is regulated so that the patient supports without too much difficulty the successive discharges which result from the extra current. The baths have a variable duration of from fifteen to twenty minutes, and have a decided sedative effect on the choreic movements.

I have dwelt at some length on these galvanic baths, because they have been of precious value to us, not only in relieving the tremblings of chorea, but also those that accompany paralysis agitans and disseminated scleroses, and I have seen many practitioners fail on the attempt to give these baths properly.

Beard and Rockwell have proposed a new method of employing electricity on these cases, which they call general electrization, and which resembles the method above described. The feet of the patient are placed on a moist copper plate, or he is made to sit on a wet sponge; this plate or this sponge is connected with one of the poles of a faradic battery, while the other is moved back and forth over different parts of the body.

Lubelski was the first, in 1867, to advise the use of ether spray along the vertebral column. These pulverizations are made by means of a Richardson hand atomizer (or a Codman and Shurtleff spray-producer); the duration of the operation need not exceed five minutes. I have used this method of treatment (which is perfectly safe) with considerable benefit; certainly with diminution of the choreic movements. Zimberlin, Mazade, Jaccoud, Rose, Fabry and Marsiglia have reported cases of chorea cured by the ether spray.

The third class of medicaments applicable to the treatment of chorea is constituted by those remedies which produce sleep, and therefore cause cessation of the choreic movements. In this group we place opium, chloral, and chloroform. Before the introduction of chloral into therapeutics, great use was made of opium in large doses, and inhalations of chloroform. Trousseau, Benazet and others had advised opium in chorea, while Gery, Dacier and Pollock highly recommended inhalations of chloroform as a means of attenuating the intensity of the choreic manifestations. But these two medicaments have given place to a substance every way as active and which produces the same effects without having the inconveniences of chloroform and opium, namely, chloral, which is admirably borne by children.

Bouchut has given the most precise directions for the administration of chloral in chorea. He gives in the morning after breakfast forty grains of chloral

---

Vide Wad. Clinical Lectures on Chorea and its Treatment. (British Medical Journal, 1872.) Dr. Wad favors the large doses in chorea. Barlow, On the Treatment of Chorea by Zinc Sulph. (Medical Times and Gazette, 1857.) Butlin, Cases of Chorea Treated by Sulphate of Zinc. (Lancet, 1871.) West on Diseases of Children, article Chorea.

†It may be thought that the author, who is a recognized leader in therapeutics in the old world, is too much of a nihilist in treatment, and that he has rather summarily disposed of—as of little value—some of these medicaments, much employed in chorea. Certain it is that multitudes of practitioners all over this country, as well as elsewhere, are using bromides and zinc in this affection. It is always proper to ask the reasons for our cherished beliefs, and therefore it is proper to demand of those physicians who have the most faith in these remedies in chorea, if there faith is well grounded.

The darkness in which the etiology of this disease is enshrouded ought to lead us to hesitate before we treat chorea as a neurosis whose essence is spinal excitation, pouring in the bromides till reflex excitability is well-nigh abolished and the blood is seriously impoverished; this, too, in the case of a disease characterized by anæmia and debility.

As for sulphate of zinc, when it does good in chorea, I am persuaded that it does good not as a spinal medicament but as a general tonic, and hence deserves to be placed by the side of iron and arsenic. Nor do I believe in the large doses advised, despite the high authority of the late Dr. Thomas Watson. (*Vide* Braithwaite's Retrospect, Part 80, page 54. TRANS.)

in one dose, and so produces a sleep which lasts till noon; food is then administered, and forty grains more of chloral; then about tea-time, when the child wakes up, a full meal is given and generally the child goes to sleep again and sleeps all night long. In this way the young patient is kept asleep most of the time for several successive days. Cadet de Gassicourt employs another method. He prescribes every two hours a tablespoonful of a four-ounce solution containing one dram of chloral, and continues the administration till deep sleep is produced.

Whether you make use of the large doses of Bouchut, or the smaller doses of Cadet de Gassicourt, it is necessary always to administer the chloral in a considerable quantity of some diluent, and the best preparation is evidently that which consists in adding a portion of syrup of chloral to a cup of egg and milk. [The syrup of chloral of the French Codex contains one gramme to the tablespoonful.—TRANS.]

Chloral can hardly be called a curative medicament, yet it renders great service when the disease attains considerable intensity, for it enables the patient during the sound sleep procured by this remedy to obtain cessation of the fatiguing and painful choreic movements. You ought then always to employ this remedy where you see the strength of your little patient becoming exhausted, and especially where you see the skin becoming excoriated by reason of the intensity of the muscular disorder.

The last group of medicaments is composed of remedies which are addressed more particularly to the general condition, and here we have to study one kind of treatment which is debilitating, and another which is tonic.

Debilitating medication is represented more especially by tartar emetic. Gillette is the most ardent defender of this kind of treatment, which has received a certain amount of favor, since we have seen Cadet de Gassicourt attribute to it a very beneficial influence in cases of grave chorea. These were Gillette's rules for the administration of this medicament: The first day hourly doses were given, till three grains were taken. The next day the dose was doubled; the third day it was tripled. Then the child was allowed to rest for three or four days, and if he did not get any better, the medicine was recommenced in the dose of four grains the first day, eight grains the second, and twelve grains the third day. Then there was another interval of three or four days, and the medicine was renewed in doses of five grains the first day, ten grains the second day, and so on.

Whatever may be the value of the facts cited by Bouley, Gillette, Bonfils, Marcotte and Peslerbe, I am a most bitter opponent of this kind of treatment. I consider tartar emetic a very dangerous remedy, especially in the case of children. I expressed myself freely on this subject when lecturing on pneumonia,* and am persuaded that under any circumstances it is impossible to find in a hypothetical amelioration a sufficient compensation for the disorders which tartar emetic, administered in these large doses, determines in the digestive organs.

*See my translation of the lectures on Pneumonia in the Boston Medical and Surgical Journal, Vol. cvii, Nos. 20, 21, 22. TRANS.

Tonic medication, as in the case of all diseases which tend spontaneously toward recovery, occupies the first place in the treatment of chorea. At the head of the list of tonic remedies we must put arsenic, which is administered by mouth and by hypodermic injection. In this country it was Aran and his pupil Siredy who first showed the advantages of arsenic in the treatment of this neurosis.*

If you prefer to give it by mouth, you may make choice of Boudin's liquor, (preferred by Siredy) of arseniate of soda, which Cadet de Gassicourt employs, or of Fowler's solution, and you may gradually increase the dose from one milligram to ten milligrams of arsenious acid per day; watching of course the effects of the medicine on the digestive tube. I much prefer the hypodermic method, for this enables us to obtain the good effects of arsenic with quite small doses. Fowler's solution is marvelously adapted for subcutaneous injection, for it occasions no irritation of the skin, or cellular tissue; you may boldly inject from one to four drops of the liquor potassæ arsenitis, and you may even exceed this quantity. This mode of treatment by subcutaneous injections, employed for the first time by Radcliffe in 1866, has been brought into most general use by the school of Lyons, and Perraud and Garin have pointed out the advantages of this mode of treatment.

By the side of the arsenical treatment we must place, almost in the same rank, the use of sulphur baths, hydrotherapy, and gymnastics. Hydrotherapy gives excellent results in chorea, and you ought always to resort to it when there is no cardiac complication. It is well to rely on the jet douche, the shower bath being of doubtful utility; you should, as Beni Barde counsels, begin with the tempered douche, and accustom your patient by degrees to the cold douche. When the patient cannot have the benefit of an establishment for hydrotherapy it is well to rely much on wrappings in wet sheets. Sulphur baths are inferior to hydrotherapy in chorea; nevertheless in the rheumatismal forms it is a good mode of treatment. Finally, gymnastics, as Blache has shown, who out of one hundred and eighty-eight cases obtained by this method one hundred and two cures in thirty-nine days, is an excellent method of treatment; but the gymnastic exercises must be directed after a special manner, and Laisné has given the best rules for their performance.

*The arsenical medication is very much in vogue in France at the present day. Siredy employs the solution of Boudin, which contains a milligram of arsenic in each gramme, and of which this is the formula:

℞ Arsenious acid, 1 gramme (15 grains),
Water, 1,000 grammes (about 1 quart)

M. Begin with ten grammes a day [℥ij ss] of this solution, in the case of an adult, and increase by five grammes [℥j and gr. xv] each day till thirty to thirty-five grammes [an ounce and over] are taken daily. In a child you should begin with two grammes [℥ss], and increase by two grammes each day. Bouchut, Archambault and Cadet de Gassicourt employ arseniate of soda; they begin with five milligrams and increase to twenty, twenty-five and thirty milligrams each day. Perraud employs subcutaneous injections of Fowler's solution, in the dose of four or five drops once a day, or even once in two days. (*Cadet de Gassicourt, Traité des Maladies des Enfants. Art. Chorea Pomel, On Arsenical Medication in Chorea. Thèse de Paris, 1879. Garin, Thèse de Lyon, 1879*).

Laisné is one of those who have done the most to raise gymnastics to a practical art in its application, not only to the physical training and development of youth at schools, but also to our hospital services, as therapeutic means. He several years ago instituted at the Hospital des Enfants, the gymnastic treatment of chorea, following the directions of Blache. It is necessary that the movements shall be rhythmical, and regulated by chanting; some cases are speedily benefited, others not at all, by reason of the extreme incoördination, which will not allow the child to stand erect. There are, moreover, choreic children so impressionable that their disorder augments the moment that you endeavor to make them execute co-ordinated movements before spectators.*

In these cases (and here I partake of the opinion of Cadet de Gassicourt) gymnastics can have no good effect. You can aid these gymnastic exercises not a little by massage, which is especially applicable to the muscular groups the most affected by chorea.

Such gentlemen are the therapeutic measures the most employed in chorea. It remains for me, in conclusion, to sum up the main points in the management of this affection. From a therapeutic point of view, you will divide the choreas into two groups: those which are relatively benign, and those which are relatively grave.

In the case of the benign choreas ("St. Guy's dance") which do not require the patient to keep her bed, but allow her to walk about and perform certain movements, notwithstanding the motor incoordination, you should employ, above all, gymnastics and hydrotherapy, and administer arsenic by mouth or hypodermically.*

If cardiac complications exist, you may apply a blister over the region of the heart; you must eschew hydrotherapy, and be chary of gymnastics; here massage and the ether spray along the vertebral column will do good. In the grave choreas, those which produce by reason of confinement in bed (necessitated by the extreme motor inco-ordination) excoriations of the skin; and general troubles of nutrition, you may use chloral, bromide and massage. Chloral will enable you to procure sleep, and at the same time arrest of the choreic movements; bromide of potassum will act in the same way, and the combination of these two medicaments makes an excellent sedative remedial agent. Massage methodically practiced will prove a powerful auxiliary, and you can complete your treatment by subcutaneous injections of Fowler's solution. But do not forget that the success of your medication depends more on the period in the evolution of the malady when you render assistance than on the medicines which you employ, and it is necessary when you are treating chorea, always to have in mind that you are dealing with a disease which regularly passes through definite periods,† and spontaneously tends toward restoration. Your treatment then should have for its end not to cause sudden cessation of the symptoms, which is impossible, but only to obtain a diminution in their intensity, and duration, and this is all that in the present state of therapeutics one can hope to accomplish.

*Laisné trains choreic children in this way. The patient (supposing it to be a little girl) stands before the tutor, being held by his knees; the latter seizes her hands and requires her to make regular movements with each arm, counting, with loud voice or chanting, one, two, three, four, etc., with each movement. The child is told to listen, and to make no effort on her own account, for if encouraged too much to make voluntary efforts, her attempts would be likely to end in abrupt and disordered movements, which would defeat the object intended. Vigilance is required in these first manœuvres, in order to be always ready to yield to the sudden spasmodic contraction of a member, so likely to result in some children after these forced movements. The child is held as firmly as possible by the arm, and the endeavor is made to produce movements more or less rapid but always rhythmical with the legs. From time to time the child is allowed a brief rest; finally the patient is placed with its back against a ladder called orthopædic ladder, and is made to grasp with its hands the rounds above the head; the legs are supported while the child is kept suspended, as long as can be done without pain or fatigue; after a little rest this manœuvre is gone over again. During the intervals frictions are practiced of the extremities and other parts. The tutor must use the utmost judgment and patience and not demand more of the child than it has strength to perform. When a little improvement is noted and the child is getting wonted to its tasks, new gymnastics are attempted, and the little patient is now urged to use its powers of volition. Among these exercises we may enumerate the use of the dumb bells, the arm-swing, the horizontal ladder, the parallel bars, etc. After a time the patient can control her movements sufficiently to go through these exercises without any assistance, engaging with her companions in these sports.

In choreic persons who are bad cases, the exercises ought to be very frequent, as often indeed as twice a day. Caution must be taken that they do not injure themselves, and that sufficient intervals of rest are allowed. One is often obliged when patients are extended on a cot or long chair, to hold their arms and legs so that they may not injure themselves by the blows which they inflict, or may not slide off onto the ground. —Laisné, "On the Application of Gymnastics to the Treatment of Certain Diseases.)

*Probably no remedy is more used in this country in the treatment of chorea than arsenic. Fowler's solution is the form generally chosen; beginning with three we gradually increase to eight or ten drops after each meal. The great majority of cases can be cured in from two to six weeks by arsenic. TRANS.

†In accordance with this well-known law of spontaneous recovery, Gray and Tuckwell, (*vide* articles by these authorities in the Lancet for 1876, on the "Expectant Treatment of Chorea") advise expectancy in this disease and recommend only hygiene. Of twenty cases which came under their observation, the average duration was sixty nine days, and these are the figures which Prof. Sée obtained in an analysis of the one hundred and seventeen cases.

[Continued.]

American Drugs—By J. Moeller.

FOLIA JACARANDA PROCERA (CAROBA).

The first of these are conical hairs composed of but one cell, broad at the base, tapering gradually to a blunt point, 0.5 mm. and more in length, rough walled, and rasp-like at the sides; the others are round, cake-shaped glands, composed of six to eight cells arranged together in a star-shape (0.05 mm. in diameter) with a yellowish amber-like secretion.

The drug is odorless; when chewed it has a bitter and astringent taste. In 1828, Dr. Schimmelbusch first introduced it into Germany, where, however, it was soon forgotten. Some fifteen years ago it was again heard of there as a blood purifier and diuretic. It was also recommended, to be used both internally and externally, in syphilis. In 1867, Hague (Pharm. Centralh. 1867, No. 3), described a sample sent him from St. Petersburg, consisting of five different and apparently entirely distinct sorts of leaves, whence he concludes that these leaves belong to five different bignoniæ. I do not think from the specimens before

me that this conclusion is warrantable, though it may be quite probable that the gatherers may occasionally throw similar leaves of different, but closely allied plants, into the same basket. Jacaranda procera Sprengel (Bignonia copaia, Aubl., Bignonia caroba vellos, Kordelesteis syphilitica arruel) a Brazilian Bignonia called by the inhabitants caroba, carobinha, caroba mirim, caroba minda, is said to be the parent plant.

Theo. Peckolt has subjected the bark and leaves of the caroba to a very searching analysis, and has found that the former possesses more carobin, the latter more aromatic substances. His analysis resulted as follows:

	Leaves.	Bark.
Cellulose and water	853.304.	885.090
Crystalized carobin	1.620.	3.000
Carobic acid, crystallized	0.516.	——
Steocarobic acid, crystallized	1.000.	——
Carobon, balsamic resinous acid	26.666.	——
Caroba resinous acid, odorless	——	2.000
Resin of caroba, tasteless and odorless	33.334.	5.000
Caroba balsam	14.420.	——
Bitter substance	2.880.	2.830
Extractive substance	10.550.	19.530
Extractive substance and organic acids	10.000.	——
Caroba tannic acid	4.390.	4.800
Glucose	——	1.650
Chlorophyll and wax	9.000.	——
Albumen, starch, dextrin, salts	32.120.	76.100
Calcium malatum	0.200.	

O. Hesse (Liebig's Ann. d. Chemie, 1880, p. 150) has made diligent, though futile search for alkaloids in these leaves, coming to the conclusion that their entire efficacy has been considerably exaggerated. It had been supposed that they were descended from a common ancestry with the Pareira bark, an error probably born of the fact that both possess like qualities as a drug.

Peckolt's "carobin" forms felt-like glittering crystal needles, is odorless, and has an alkaline taste, with a slightly bitterish after-taste. Heated upon a platinum foil, it melts into a clear liquid, and burns with a bright flame, leaving no residue. It cannot be sublimated. It is insoluble in ether or ethereal spirits of wine, but very slightly soluble in cold water or cold alcohol; easily soluble, however, in boiling water or hot alcohol, again crystallizing as it cools off. The solution will turn curcum-paper brown. The foregoing table shows that the amount of alkaloid in the bark is nearly double that found in the leaves, whilst the former is wholly destitute of all aromatic substances. Since it is the leaves only that are in use as a drug, we must look upon their aromatic component parts as being their most prominent curative properties. The name caroba has an unusually manifold signification. With us, as is well known, the fruit of Ceratonia Siliqua L., carobs or carubs, a sort of acorn (Pistacia terebinthus), are known to commerce as carobs or carobbs. In Brazil they mention, furthermore: Caroba de flor verde; Bignonia quinquefolia Vell. (Cybistax antisyphilitica mart).

Carob-assú: Jacaranda subrhombea D. C.

Caroba boanca: Sparattosperma lithontripticum Mart.

Caroba do campo: Bignonia nodosa, Mans.

Caroba des paulistas: Jacaranda oxyphylla Cham.

Caroba guyra: Bignonia purgans.

Caroba preta, carob-assú.

All the different kinds of carobs are used by the Brazilians as medicaments, and Peckolt (Zeitschr. d. allg. österr. Ap. V., 1881, page 480), thinks they are in every way preferable to sarsaparilla. A certain syphilitic affection of the skin prevalent amongst the negroes, and called Bobas, is often cured by means of a preparation called "Massa de Dr. Alves Carneiro," which is composed as follows:

℞ Fol. carob. pulv., 90.0
Sarsaparillæ pulv., 30.0
Fol. sennæ pulv., 30
Calomelanos, 2.0
Syrup simpl. q. s. ut. ft. electuar.

D. S. A teaspoonful morning and evenings with caroba tea.

Peckolt prescribes caroba balsam in doses of 1.0 g. as a tonic, and also as an external application for wounds; carobon in doses of 0.1 g. for affections of the skin, and carobin in doses of 0.5 g. for syphilitic and scrofulous affections.

These mere indications are not sufficiently comprehensive, nor have any pharmacodynamic experiments as yet been published on this subject that can pretend, in any reasonable degree, to satisfy the demands of science and research, which is indeed a rather remarkable circumstance in view of the reputation and popularity of this drug.

Secret Remedy Nuisance and Quackery.

In the April number of the THERAPEUTIC GAZETTE we find a charming satire on our modern specialities (patent medicines), and the secret remedy manufacture, (fabrication), and of the claims which are presented (bolstered up) for them everywhere, even in home and foreign medical journals, which otherwise assume a highly earnest and deeply scientific air. This article represents on three pages deceptively imitating the usual swindling announcements, an advertisement of the "Nineteenth Century Therapeutical Company." This company recommends as their products: Kochine, Jennerine, Pasteurine, Consumptine, Ostrichine, Dyspepsine and Croupine, "rationally thought-out medicines," for the infallibility of which in the diseases for which they are recommended, this company, of course, guarantees. The medicines contain the active principle of Koch, Jenner, Pasteur, that of consumption, that of the ostrich, of dyspepsia, of croup, and the ending —"ine," thus imitating the usual name for the other specialities.

After the immortal discovery of Koch an agent had to be discovered which ferrets out the death-carrying bacillus in its "lair," in the tissues of the lungs, and which there deals it the death-blow. After innumerable efforts "pains" and experiments carried on during day and night the company succeeded in finding in Kochine a composition which destroys the bacillus in two ways, the mechanical and the chemical. The needles of crystallization "crystalline needles" of one of the ingredients perforate or "pierce" the parasites, and, whilst they at the same time kill them instantly and fix them securely, they afford a chance to the chemical efficacy of the other ingredients to oxydize them completely, and thus to favor their complete removal from the organism. The efficacy of Kochine can besides be increased by charging it with voltaism and applying it by means of the telegraph or telephone. (Of course, then the price will be propor-

tionately higher.) Jennerine improves the blood and changes plebians into blue-blooded patricians. Pasteurine destroys the bacteria of atmospheric air, and dropped upon absorbent cotton and inhaled through an inhaler, allows no bacilli to penetrate into the recesses of the organism, so that disease becomes a matter only known in the history of the past. The remedy, the composition of which the inventors publish in their usual generous way, consists of nitrogen 1 volume, pure anhydrous carbonic acid 2 vol., manganate of potash 2 parts by weight, pure oxygen, without any admixture, 1 vol., pure crystalline carbon 1 part by weight; these ingredients are boiled in an air-tight platina vessel! The resulting syrupy and oleaginous mass is then dissolved in a strong solution of nitro-muriatic acid; then the active principles of eucalyptus globulus, carbolic acid, nitrate of silver, dissolved in a menstruum of strongly concentrated sulphuric ether, are added, the whole precipitated in a platina vessel, etc. Consumptine restores to the body the carbon lost through the sputa; as a substitute of the albumen is given the ostrich-albumen contained therein; the rest is effected by a combination of cod-liver-oil and water; scientifically speaking the remedy would be called hydro-oleoprotein. Ostrichin is the pepsin of the stomach of the ostrich, which the inventors have proved to be the best after difficult experiments with goose, turkey, crow, vulture and eagle pepsin. This agrees with the capability of ostriches to digest sand, gravel, iron spikes, etc. The remedy is an excellent one for the restoration of the suffering body, as all diseases originate from the stomach. (The company raise their own ostriches). In cases where ostrichine is not borne well on account of its strength, dyspepsine will be found excellent, which is a composition of pepsin of the first named birds with the stomachic and pancreatic juices of the hog, calf and sheep. Croupine destroys the "bête noir" of medical sciences, the croup, and its twin sister, diphtheria; it is composed of ostrichine and vegetable digestive agents, and is applied either in the form of powder by means of an insect powder injector (gun), or in fluid form by means of spray upon the diseased parts. It effects the digestion of the membranes; but the inexperienced physician must be careful to prevent the self-digestion of the tonsils and of the uvula from taking place at the same time.

The company will not spare any trouble to invent other therapeutic agents, and already draw attention to the fact that in a short time they will be able to offer to the public " ne-versay-di-ine," a remedy calculated to secure a youthful old age; "cancerine," a safe remedy against cancer, (no pain, no knife, no relapse, sure cure or the money will be refunded); "brainerine," prepared from the brains of men and different animals, especially those of the monkey-family, which is most closely related to man. (As brains are scarce at present, for the next few years but little brainerine can be manufactured, and we would advise physicians to lay-in an early stock of this article, subscriptions for which are now received.)

Of course all these remedies are protected by letters patent, and it is requested to respect the trademark.

The prices are comparatively cheap, for instance: Kochine $6.75 per oz., voltaized $13.75; ostrichine $10.00; croupine $7.50.

Testimonials from professors and renowned gentlemen and ladies certify, of course, in overwhelming expressions the excellent results achieved by these remedies.—*Deutsche Medizinal Zeitung*, No. 22, May 31, 1883.

Hydrobromethyl as an Anæsthetic During Parturtion.

The following is a brief extract of a lecture delivered by Wiedmann. The author after giving indications, contra-indications and results of the use of chloroform, and a few other anæsthetics, treats quite at length of hydrobromethyl, or æthylbromide (Chem. form. $C_2 H_5 Br$). It is a clear volatile liquid with a pleasant ethereal odor. Lebert* first called attention to the drug; he used it in four cases of labor, but gave only a vague description or an indefinite account of its action, save that it acted pleasantly to quiet pain, and its use was perfectly safe to both mother and child. The physiological action is as follows:

1. Rabuteau† found that on inhalation this agent produced anæsthesia more rapidly than chloroform, but its duration was shorter.

2. The patient will bear the new agent better than chloroform, because its action is not irritating.

3. It is almost completely removed from the system by expiration.

4. A subcutaneous injection of morphia increases the rapidity of its action.

5. The contra-indications are the same as for chloroform; it is administered in the same manner either by the aid of a funnel, or simply inhaled from a folded cloth.

Lebert states that he gives only small quantities, using only a few drops at the beginning of each pain, which is sufficient to produce full anæsthesia. Wiedmann has found that the agent must be administered freely, and especially during the absence of a pain. Care should be taken that complete narcosis is not produced: patient must be able to answer all questions clearly and distinctly; this degree of anæsthesia is sufficient to render parturition perfectly painless. The number of cases observed by W. is relatively small to set up indications and contra-indications for the use of hydrobromethyl, but he thinks he can venture to say that this agent has a brilliant future as an anæsthetic, not only in dystocia, but also in normal parturition. Author concludes by presenting some of the advantages of this anæsthetic during accouchement:

1. There is no danger to either mother or child, since narcosis is so easily controlled: patient is not unconscious.

2. The rapidity of its action, requiring only a few minutes, while chloroform acts slower, and to be of any benefit, deep narcosis must be produced.

3. The duration of labor is not lengthened like under the use of chloroform.

4. There can be full consciousness and still absence of pain: patient can answer all questions, and carry out the orders of the accoucheur.

5. Post-partum hemorrhage, after the use of bromethyl due to atony of the uterus has not been known to occur; in this respect it is far superior to chloroform.—*St. Pet. Med. Wochschft.* T.

---

*Archives de Tocologie, June, 1882.

† Compt. rend., T. 83, No. 26.

Aluminium in Tuberculosis of the Lungs.

By close observation and comparisons at the sick-bed, Pick arrives at the conclusion that of all the remedies used up to the present time, there are none better than those of the alum group. Alum has been administered in different forms, especially when hæmoptysis and diarrhœa were present. Author thought of the anti-bacterial properties of alum, and therefore used this group with the following results: The bacilli of tuberculosis are arrested in development, so that the disease finally loses its specific character. When alum is administered for some time it prevents a relapse of the disease; but if definite changes have taken place in the lung tissue, this drug has not the power of restoration; it has only the power of staying or arresting the disease. It seems to have the power of removing the cause of the disease, but it cannot repair the damage after it is done.

The following is a short history of a case as given by the author, with rules for the administration of aluminium:

V. J., æt. 21, complains of an irritable cough, which has existed for some time. Expectoration is thick and fœtid, chilliness and profuse sweating at night; patient was very weak; mucous membranes are very anæmic; lymphatic glands are markedly enlarged; voice is weak and hoarse; patient is troubled very much with diarrhœa.

Auscultation and percussion, with the above symptoms, show distinct evidence for the diagnosis: *Infiltratio pulmonum tuberculosa lateris utriusque.*

Patient was ordered: ℞ Alumini metal, 1;00; aluminæ hydr., calc. carb. depur., ää 5.00; gum trag., q. s. ut. f. Pil. No. 60. D. S. Three times a day, two hours after meals.

Result: Eight days later diarrhœa ceases, appetite increases, fever and night sweats very much improved. Ferric extract of malt and extract taraxacum are now added to the former prescription.

In the course of ten days the objective symptoms have disappeared on the right side, cough very much better, little or no expectoration, and patient is strong enough to walk around. At the expiration of nine weeks appetite is good, bowels are regular, objective and subjective symptoms have disappeared almost entirely; there is no more sweating or fever. Patient continues the last prescription.—*Wiener Medicinische Wochenschrift.* T.

Extract of Calabar Bean.

About two years ago Subbotin and later Schaefer, of Bonn, highly recommended the calabar extract as an excellent tonic for the bowels, and at the same time as an active eccoprotic. S. has succeeded in removing fæcal tumors with this drug that have resisted all ordinary cathartics. The drug is very efficient in flatulency, and meteorism. In cases of chronic catarrh of the intestines and habitual constipation the effect is good but only a passing one; usually the dose must be repeated, and the patient becomes accustomed to the drug. Hiller, of Berlin, made a series of experiments on animals by opening the abdominal cavity and observing the effect of the drug. Its characteristic action is a spasmodic tetanic construction of the lumen of the intestine, the walls become anæmic and peristaltic action disappears entirely; the whole effect may be compared to the action of calabar bean in the sphincter muscles of the iris. From the observations of H. we can readily see that the eccoprotic action of calabar is brought about only where there is an accumulation of fæces, in the rectum, the contraction of the walls of the intestine has a tendency to force out the contents, by the ring-like contractions occurring above. H. suggests that judging from the action of the drug its application in Asiatic cholera might produce good effects; the bowels can be kept absolutely quiet for two days, while mucous lining can be kept in an anæmic state for the same length of time, rendering transudation almost impossible. It should be given subcutaneously until constitutional effects are produced, but always in combination with an opiate.

Dose, 5–10 milligrams every 2–3 hours until contraction of the pupils occur. Great caution must, however, be taken, since the remedy is very strong. —*Zeitschrift. f. Therapie.* T

New Parasites that Infect Man.

1. *Distoma Hepatis Endemicum.*—This parasite so far has been found only in middle Japan, where it occurs endemically, and is a great scourge to the population. Twenty per cent. of the population are infected. The seat of this parasite is the liver. The size of the parasite is from 8 to 11 mm. long and 3 to 4 mm. broad.

Symptoms of their entrance into the system Hunger, colicky pains, sallow complexion, with increase in size of the liver. The disease may last for 15 years. It is detected by the presence of distoma eggs in the stools. The inhabitants of the infected district living in a portion of country but recently reclaimed from the sea, and consequently they have only such water to drink as is found in stagnant pools.

2. *Distoma Hepatis Innocuum.*—This differs from the first in its larger size, growing to 20 mm. Several such specimens have been found in the livers of phthisical subjects without their presence having been suspected.

3. *Distoma Pulmonale.*—From 8 to 10 mm. long, color of the common earth-worm, with movements similar to those of the leech. This parasite has been found in 20 autopsies made at Orayama. Their seat is the lungs, in which they live singular in cavern-like apartments, and not in the bronchi, as might be expected, although there is a connection with the bronchi by means of which the eggs gain exit in the sputa. This parasite is very frequent in many parts of Japan. Patients infected with them are invariably troubled with bloody sputa. Prof. E. Baeltz, in Tokio, Japan. *Berlin Klin. Wochenschrift*, No. 16, 1883.

Iron Administered Subcutaneously.

The regular administration of iron always causes gastric disturbances, especially when continued for some time. This prompted me to try the subcutaneous method of administration. The best suited preparation is peptonized iron, in the form of powder. It is readily soluble in water, and contains 5 per cent. oxide of iron. Lasser employed a solution of 1-6 gramme to 10 grammes distilled water. He injected by means of a Pravas syringe containing 1 gramme, half the contents in the back and the balance in the gluteal region. The action of iron administered in

this manner is very prompt. In the course of an hour, there was already an increase of 1-2—1° in the temperature, and the pulse was accordingly increased in frequency. After the use of one syringeful, the characteristic congestions (profuse bleeding from the nose) make their appearance. When continued for some time, in chlorosis, anæmia and consumption, the body weight increases and the color of the face improves. Injections carried on methodically, in rabbits, for four weeks, will increase their weight one-fifth. The largest portion of the iron can be found in the fæces; gastric disturbances were never present. L. comes to the conclusion that, aside from the little pain caused by injecting, there is nothing that can be said against this method. It is prompt in action, and brings about a result much more rapidly than the old method per os.—Dr. Lasser in *Deut. Med. Zeit.* T.

Wood-Pulp as a Surgical Dressing.

On account of its great power of resorption Paul Bruns, in Tübingen, recommends highly wood-pulp in the place of absorbent cotton, turf, sand and all other agents of a similar character. Wood-pulp of the Pinus picea takes up twelve times its own weight of fluid. Sphagnum absorbs also twelve times its weight, but this objection is raised to it, namely, it must be wet or it will not act. Turf takes up only eight times its own weight. And in order for turf and sphagnum to absorb well they must both have at least 80 per cent. of moisture in them. Bruns tabulates 180 important operations dressed with wood-pulp prepared with sublimate. In no instance did septicemia or erysipelas occur. The dressing remains intact from 1 to 4 weeks. To prepare the pulp as it comes from the mills, first pass it by rubbing through a wire sieve, dry thoroughly and impregnate with ½ p. ct., sublimate and 10 p. ct. glycerine. By reason of resin and ethereal oils present in the pulp of pinus picea its antiseptic properties are considerable, while its elacticity permits a soft and equable dressing and compress possessed by no other agent. This dressing is applied perfectly dry, and never changed until it becomes saturated with secretions from the wound.

It is not necessary to add 10 p. ct. of glycerine, as 5 p. ct. by later experiments seems to answer well. —Prof. Paul Bruns, *Berlin. Klin. Wochenschrift*, No. 20, 1883.

Sandal Essence.

The following is a short extract of Durands investigations with the essence of sandal. It is a distillate obtained from the yellow variety of sandal-wood, and is dispensed in capsules. If given in this manner the unpleasant eructations that are present after copaiba is administered do not appear at all. The efficiency of sandal in genito-urinary diseases is far superior to copaiba or cubebs according to Panas. When given in the same doses as copaiba it does not cause any nausea, colicky pains or diarrhœa nor does it disturb digestion in the least. These are great objections to copabia and cubels and the discovery of sandal essence is of great importance to every practitioner. Gubler and Simonet have obtained good results when all other remedies have failed. In cystitis sandal acts rapidly and pleasantly, it diminishes the frequent desire to micturate in a day or two. The drug must be given in increasing doses.

Until now some difficulty has been experienced in getting a reliable article. It is frequently adulterated on account of its high price.—*Zeitschrift. f. Therapie.* T.

Boldo.

The leaves of the Monimiacea Peumus Boldo are imported from Chili, where the tree or shrub is indigenous, under the name of Boldo. It is claimed the therapeutic effect of this drug is similar to the action of Coca.

In the hospitals of Paris it has been used with perfect satisfactions in affection of the liver, and in gall-stones. The drug is prepared by means of distillation or extraction with ether, which furnishes an ethereal oil, and an alkaloid culled boldin.

According to Cl. Verne, the best preparation to administer is a concentrated tincture or an elixir that contains all the active principles. [Undoubtedly the action and application of this remedy is generally better understood by the readers of the GAZETTE than abroad, which is wholly due to the untiring efforts of Parke, Davis & Co. TRANS.]—*Repert de Pharm.* T.

The Employment of Corrosive Sublimate in Solution During and After Labor.

Ollivier reports the results with solutions of sublimate in the hands of Tarnier at the Paris Maternity. The solution used was 1:2000, with which the patent is washed and injected; afterwards a compress dipped in the solution is applied to the genitals. During parturition a fresh compress is applied 3 to 4 times a day. As soon as anything abnormal in the course of the lying-in patient occurs, frequent injections are made into the genital organs. The results were good. Of 350 patients one died of an old peritonitis. No case of intoxication from the sublimate occurred. Sometimes the compresses irritated the outer genitals; the compresses were removed and the irritation ceased. Tarnier recommends that the bedding be disinfected before-hand.—Ad. Ollivier, *Ann. de Gynècol. xvii.*

Naphthalin Treatment.

In the face of so many opinions diametrically opposed, as to the worth of naphthalin Rydygier publishes his observations and experience:

All wounds except quite fresh can be as well, if not better, treated with naphthalin dusted over the surface, than with iodoform.

Naphthalin irritates more than iodoform but this very quality can be of advantage in the treatment of glandular troubles, abscesses, lupus, etc. Naphthaline does not irritate healthy skin.

Crystals should not be used, sprinkle the wound with finely powdered naphthaline instead, and over this apply a sublimate bandage.

Naphthaline can be employed in all cases where iodoform is indicated. It is 30 to 40 times cheaper than iodoform.—Dr. Rydygier, *Klum a. W. Berlin. Klin. Wochenschrift*, No. 16, 1883.

A Case of Poisoning from Picric Acid.

Patient, man 40 years old, phthisical, drank in a half cup of coffee a teaspoonful of pure crystallized

picric acid. Vomiting in half an hour. Carried to hospital and stomach washed out four hours later. Skin and conjunctivæ yellow, pulse frequent, temperature 103°; patient complains of intense itching.

The next day two stools followed, both containing picric acid. During the next 10 hours urine contained picric acid, and during this period the patient suffered from erythema. The sputa also contained picric acid. The following day the urine showed a large quantity of indican and numerous cylinder, of granular type, and fatty degenerated epthelium. From the urine the picric acid disappeared in fourteen days. A. Halla, *Prager Med. Wochenschrift*, No. 50–51, 1882.

The Micro-organism of Pneumonia.

The authors present a special micro-organism (different from any yet discovered) which they found both in the sputa and blood of patients with pneumonia. The sputum, injected subcutaneously in rabbits and dogs, produced "fatal acute septicemia." Defibrinated blood of patients with pneumonia injected into the peritoneal cavity of dogs produced only temporary fever. In no case did genuine pneumonia follow the injections. In some instances the culture-fluid was inserted in the trachea itself, producing, however, only acute septicemia.—L. Griffini e A. Cambria, *Esta. dal. Gior. internaz delle sc. med. iv.*

Japanese Kak-ke (Beri-beri).

Scheube divides the chief symptoms into four groups: (1) Motor and sensible paralysis, frequently under the guise of paraplegia, connected with atrophy of the musculature; (2) affections of the heart, with weak-heart predominating; (3) hydropic effusions; (4) diminution in the activity of the kidney. The author regards the disease a neuritis with its origin in a specific poison, running a subacute course. In this respect he varies widely from Wernich, who considers the disease as a change in the blood resembling pernicious anemia. The change in the heart's action Scheube attributes to a direct infection of the heart's vagi.—B. Scheube, *Deutsches Archiv of Klin, Med. xxxi*, p. 141, 307 and *,xxxii* p, 83.

Bacillus Malarial.

In the Clinique, at Heidelberg, the following observations in regard to the bacillus of malaria were made.

Fresh blood obtained by the prick of a needle was employed to exhibit the living organisms, while uncolored preparations dried over a gas flame showed the bacilli deposited between the blood corpuscles. Such bacilli are about ¼ the size of a blood corpuscle, with both ends bulbous and pale shaft. They possess power of locomotion. Four patients were examined in whom the bacilli were found. In one case rendered doubtful owing to the presence of sugar in the urine, the bacilli disappeared entirely from the blood on the eleventh day of the use of quinine.—F. Ziehl, *Deut. Med. Wochenschrift*, No. 48, 1882.

Hydrastis Canadensis.

The root of this ranunculacea contains berberin and hydrastin. The fluid extract prepared from the root without alcohol is highly recommended in all pathological conditions of the mucous membranes, especially as an injection in gonorrhœa and leucorrhœa, etc. When it is to be administered internally in dyspepsia, chronic affections of the stomach, the following formula is a good one:

℞ Fl. ext. canadensis..... 2 parts.
Sherry wine.....12 "
Alcohol..... 1 "

M. D. S. One-half to one wineglassful three to four times a day.

The white alkaloid of hydrastis can., called hydrastin, seems to expend its action mainly on the mucous surfaces, while berberin brings about the tonic effect. —*Pharmaceutische Post.* T

Atropine in Hyperidrosis and Urticaria.

Atropine is a sovereign remedy to arrest the profuse sweating of phthisical patients. Schwimmer obtained good results also from its use in local and universal hyperidrosis. In some of the most obstinate forms of urticaria the use of atropine is very satisfactory.

℞ Atropiæ sul. 0.008.
Glycerinæ.
Aquæ ana 2.0.
Gum Trag. q s.

M. Ft. Pills No. xvi.

The dose may range from ½ to 3–4, mgrm, pro die given until symptoms of intoxication make their appearance.—*Zeitsch. f. Therapie.* T.

Treatment of Diabetes Mellitus with Permanganate of Potassium.

Massoin claims to have observed frequent good results from the use of permanganate of potassium in diabetes mellitus, and he ascribes the entire action to the manganese, because according to Laschkewitz it produces a fatty metamorphosis in the liver, and because in many cases the liver participates, especially in the case of men.

Therefore it is these hepatogenic cases, in Massoin's opinion, that are favorably influenced by the manganate.—E. Massoin, *Bull. de l'acad. royale de méd. de Belgique*, 1882, xvi., No. 10.

Chinoidin Citricum.

Dr. Hagens, of Danzig, makes a comparison between chinoidin citricum and some of the other antiperiodics. The remedy acts best in typical cases of malarial poisoning, and quite frequently good results can be obtained when quinine absolutely fails; but its action in other febrile diseases is not to be considered.

While the action and efficiency of this remedy is in some cases superior to quinine, it is also very much cheaper. Chinoidin sometimes causes nausea that cannot be remedied by the usual remedies that are given for the relief of that troublesome symptom.—*Zeitschrift f. Klin. Med.* T

Antiblenorrhagic Boli.

The following is a formula for the much praised "antiblenorrhagic bolus" of Simmonot, of Paris:

℞ Copaiba balsam..... 25 grm.
Powd. cubebs..... .....122 "
Wax.... ... . 12 "
Rhatannia powder..... ..... 9 "
Carb. magnesia..... 6 "

The boli are made to weigh 1 grm. each, and when finished they are rolled in subcarb. iron, and coated with an ethereal solution of balsam tolu and mastich. —*Journal de Medecine de Paris.* T

Guachamaca.

Dr. Carl Sachs brought this plant from Venezuela to Europe, and prepared an extract from it. Its action is similar to that of curare; besides it has the power of producing sleep, but this effect makes its appearance very late; in one instance, in Prof. Frerich's clinic, after the injection subcutaneously of 11 milligrams the patient fell asleep three-quarters of an hour after the administration of the extract. The hypnotic effect continued for fully three hours, without any change in the circulation or respiration.—*Monatsschrift f. Deut.-Amer. Aerzte.* T

Convallaria Majalis.

In cases of organic cardiac troubles, especially in insufficiency of the mitral valve, extract convallariæ majalis aq. proved itself to possess marked stimulating and diuretic properties. As a tonic and diuretic in feeble heart as in kidney troubles its action is not so evident. In compensatory derangements of the valves it is unexcelled. The author found no evil results even after larger doses.—*Cbl. f. Therapie*, 1883, No. 2. P. K. Pel.

Chromic Acid in Ulcers of the Tongue.

J. Paget advised the use of a concentrated solution of chromic acid in psoriasis of the tongue. But in used a solution (0.5 to 100) by means of a brush in the different varieties of ulcer of the same organ. The effect of chromic acid in secondary syphilitic ulceration was highly fatisfactory, while the rhagades of the tertiary stage healed very kindly.—*Wiener Med. Blät.* T.

The Local Treatment of Erysipelas.

Phenic acid, 1 part.
Alcohol, 1 part.
Essence of turpentine, 2 parts.
Tincture of iodine, 1 part.
Glycerine, 5 parts.

With this moisten all superficial erysipelatous patches every two hours—Rothe, *Revista Farmaceutica.*

Euphorbia Pilulifera: a New Remedy for Asthma.

This remedy is administered in Australia for asthma, and is said to be superior to all others. It is prepared as follows: Thirty grains of the leaves are boiled in two liters and 270 grams of water, which is reduced to 560 grams. Of this, from two to three glassfuls are drunk daily.—*Med. Rec.*—*Jour. de Medicine, Centralblatt für Therapie.*, No. 1.

Treatment of Acute Infantile Rheumatism.

℞ Quiniæ sulphatis, grs. xlvj.
Veratriæ, gr. ½.
Extracti digitalis, gr. iij.

Misce et ft. pilulæ, No. xxv.
Sig.—From eight to ten daily.
—*Petit Moniteur de la Médicine.*

Correspondence.

The West as a Field for Locating.

My frequent contributions to the GAZETTE, and to other medical periodicals, during the past two years, have made me an object of solicitude to multitudes of nomadic physicians all over our great domain, as well as in foreign countries. The weekly budget of letters from all parts of the country, inquiring of me the prospects Kansas affords young, old and middle-aged physicians for locating, as a health resort, and as a means of livelihood for specialists in the various branches of medicine and surgery, is already larger than my individual time and means can meet, and I therefore, with the kindly permission of the editors, will endeavor, through the columns of the GAZETTE, to furnish the anxious readers thereof with all the information regarding such inquiries as I possess, in the hope it will do the most good in the speediest manner possible.

In starting out, I may as well come to the truth at once, and to the point as well, by stating that Kansas is abundantly supplied with as able, skillful and intelligent a class of physicians, young, old and middle-aged, as can be met with anywhere. I do not know of a city, town, village or hamlet anywhere within the state that has not as much medical assistance as it may require in any possible emergency. As an example, let me give you Peabody; not because it is more overdone in this particular than other towns of its size and position, but simply because it is "nearer home" and more readily drawn upon. Peabody, with its 1,200 inhabitants, its four drug stores and three attorneys, has six practicing physicians, and four engaged in other vocations. It is confronted by a town 12 miles distant on the east with an almost equal number of physicians, a village seven miles distant on the west with two, a town of nearly its own population 18 miles distant on the north with five, and the country south is literally overrun with local celebrities of all ages, schools and "previous conditions of servitude." What is thus said of Peabody can be said of almost every town of its size and railway facilities in the state. As a profession, we are overcrowded, and hopelessly and helplessly overdone. And this is notoriously the case with all towns located on the main lines of travel and traffic. In the five years I have resided here, there have been more than a dozen physicians who have tried the town "for all it was worth," by

all manner of means and devices, and who came to stay all fractions of time, from a week to a month. Being on the main line, we have two or three, and frequently as many as six, of such "prospectors" during a single week.

The liberal advertisement the west has received during the past five years has brought within its borders the majority of these recent graduates, besides a vast number of dissatisfied older and more experienced practitioners from the South, Middle and New England States. Those who have come with means have "made it" in a manner by placing their surplus cash in such investments as would do them the most immediate good, as farms, cattle or sheep, and thereby aiding materially toward their support and at the same time laying for themselves the foundations for future wealth; but those who have come with no more means than enabled them to get here, nine cases out of ten, are in serious straits to-day. It is a mistaken notion on the part of the majority of physicians in the east that we are any more in need of their services than they are of ours. No matter where nor how suddenly a town may spring up anywhere in the west, you will always find the profession anticipating it by months or even years, and well represented long before it arrives at a condition of support. Where they all come from and how they receive the same impulse at the same time and in the same direction, has always been a profound mystery to us.

Having had occasion to make an extended visit east several months ago, through Illinois, Indiana, Ohio and Pennsylvania, I found the profession less represented in either one of these states than in any of the newer states or territories of the west. There are better openings to-day in Pennsylvania than can be found anywhere in the west. I saw a large mining town in eastern Pennsylvania, within a hundred miles of Philadelphia, with a prosperous population of nearly three thousand souls, at the head of one of the largest valleys in the state, containing but three practicing physicians—separated by a creek, from a town nearly half as large, containing but one physician. A town the size of either one of these situated anywhere west of the Missouri river, would be denominated a city of the second or third class, presided over by a mayor, city fire department, city marshall, board of aldermen, two daily newspapers, a police court and a board of street commissioners, and fairly tortured to death by at least ten or twelve of the medical fraternity, besides a half dozen professional midwives and an equal number of trained (?) nurses, all in sharp, active competition with one another, and neither, in all probability, earning more than a decent livelihood, if actually earning that.

"Taking in" Iowa, Dakota and Nebraska on the "home stretch," I found the profession as fully in possession of these two states and territory as of Kansas and Colorado—Dakota more particularly so—the wonderful emigration to this new domain bringing with it more than the territory can properly provide for during the next three years, every town, from a hundred inhabitants up, receiving its additional new arrival of the "medicine man" almost as regularly as its daily mail. It seemed as though one-half of the profession was "on the road," with no particular objective point in view, but simply wandering about, Micawber-like, "waiting for something to turn up," somewhere and somehow. It is no gross exaggeration to state that I met with fully two hundred physicians on this journey who were either in search of "pastures new," or "on the hunt" for their first.

The lesson I wish to impart by all this is to the younger members of the profession—the recent graduates who are looking anxiously toward the west for a field for locating—and consists of this moral: Endeavor to be contented where your are, whatever your condition, though your daily bread may come by exceedingly gradual, slow degrees, and you cannot marry the girl of your choice for five long summers at least. If the community in which you are situated at present will tolerate you by any compromise possible, you will find your own particular locality just as beneficial to your asthma, bronchitis or dyspepsia as the plains of the far west. The "struggle," in all probability, will be just as prolonged and as severe there as at home, and may cost you more money and real suffering. Taking into calculation the expenses of a month's travel over the highways and byways of the west, and the amount incurred in "freezing out" a half dozen of your brethren located on the same "claim" as yourself, you can outlive your village rival by a handsome margin, do nothing for a year or two, and yet "come out ahead" financially where you are.

CHARLES H. MILLER, M. D.

PEABODY, Kansas.

Druggists vs. Physicians, and Physicians vs. the Code of Ethics.

I enclose a clipping from the Public Ledger, to show "how the wind blows," thanks to the efforts of your valiant paper in bringing physicians as well as druggists to their senses. Permit me, however, to call your attention to some vital points involved in the question, which must be settled in order to make a substantial and lasting agreement possible, although it is very doubtful if such a one can ever be consummated:

First and foremost, will the druggist agree to refrain from prescribing? In speaking not long ago with one of them, he did not hesitate to tell me that when any one called at his store and asked him to put up a good tonic, he invariably sold a certain compound (mentioning the ingredients), which he prepared himself; and when requested, he put up prescriptions of his own (?) for any and all diseases, "as the case required." I am not aware that this party is an M. D., if so, he has failed to "hang out his shingle" as such. The second is, will the druggist agree to do away with the thousand and one patent medicines his shelves are groaning under? The excuse given the writer was: "Why, doctor, if I do not keep these medicines on hand, some other druggist will, and since the public must and will have them, they will buy their supplies from my competitor at the next corner, and I will lose the sale and a regular customer besides. I tell you it is a question of bread and butter!" This is "a clincher" with them, and if all do not enter into the combination, the measure will prove a dead letter. Third, will the druggist agree to keep a full line of all the newer remedies tried and known to be efficacious? Fourth, will the druggist supply himself from the house originating these remedies? I have, for instance, given pre-

scriptions which contained some of Parke, Davis & Co.'s preparations, specifying that none others were to be substituted; the patient would return and state that no druggists kept these drugs, and some of them even said they had never heard of them before! I considered myself fortunate in not having had something else substituted, as is frequently the case. I became so annoyed at the repeated occurrence of such experience, that since then I have kept a full supply at my office, and compound my own prescriptions, feeling assured that when a remedy or combination of remedies is given I know exactly the contents of the vial the patient receives, and it must be said much better success has attended my practice since adopting this plan; other confréres to whom I have mentioned my plan are about trying the experiment. Fifth, will the druggist agree to keep drugs true to name? While in a wholesale house in this city the conversation turned on this subject, and one of the firm said: "I am not astonished at your putting up your own prescriptions: I will relate an incident which will illustrate the point: A certain druggist in this city ordered one pound of cinchona bark from us, and we filled the order and sent a bill. Imagine our consternation when the package was indignantly returned with a note stating that our price was exorbitant—fully a hundred per cent. more than he had been in the habit of paying. We had charged him the regular market price for a first-class article, but as he wanted a cheap article we were obliged to furnish a correspondingly inferior grade. Is it a wonder that the physician whose prescription was filled from tincture of fluid extract prepared from that stuff failed to see any improvement in his patient?"

These are some of the points respectfully suggested and submitted for consideration. On the other side, may I be permitted to ask a question in regard to the action of certain physicians? This matter has been quite enigmatical to me; any light thrown upon the subject will be thankfully received and booked. Is it unethical for a physician to advertise? The answer is emphatically 'yes,' if said physician publishes his card in a secular paper, claiming to cure where others all fail, etc., etc.; but 'no' if said physician volunteers to give public lectures to policemen instructing them how to act in emergencies; also to firemen on the same topic, or delivers to the public in general a course of lectures on hygiene, anatomy, physiology, etc., free, being careful, at the same time, to have a reporter at hand to take down every word uttered and to publish, *in extenso*, the lecture the next morning in his daily paper, giving the full name and address of the lecturer. "No!" if a number of physicians agree each to write a paper on some subject particularly interesting to students and scholars in all branches, and publish them in an "educational number" of a medical periodical, being also careful to give each physician's full name and address to each paper, and then scatter the publication, in honor of "Our Bi-Centennial" (?) broadcast everywhere—Oh, no! that is not advertising. The old adage "whipping his Satanic majesty around a stump," is applicable here as well as in many other instances, *e. g.*, writing commendations and praises for "specific makes of preparations and compounds." The latter is also a very good way to bring one's name before the public; so strong is that desire and passion that even a neighbor, a professor in the "expectant school," has "succumbed to the temptation" and appended his cognomen to the wrapper enclosing a "cold water soap for laundry purposes," averring that as a cleansing compound and healthful dirt eradicator for the skin and bath purposes, it is unexcelled, and so on *ad infinitum*. Were all the instances which have been noticed of this species of clandestine advertising collated, they would probably fill the entire columns of the GAZETTE. But "enough is as good as a feast."

MEDICO.

PHILADELPHIA, Pa.

On the Value of Pathology in Practice.

F. C. Herr, M. D., Philadelphia, Penn., struck a key note in the THERAPEUTIC GAZETTE, issue July, 1883:

"It is too often our ignorance of the elementary conditions of disease that defeats the purpose we seek to attain in the administration of a remedy."

I intended to italicize portions as they impressed me, but the whole, each word in connection, ought to be emblazoned on the mind, not put in its pigeonholes, of any one who is an honest practitioner of medicine.

As a matter of science—knowledge—the anatomical condition of tissue after death is valuable to a physician, as certainly as is the science—the knowledge—of the movements of stars, and moons, and suns, to the astronomer. Yet, does the merchant, the dray-man, or the farmer derive any practical advantage? Don't the revolutions of seasons occur to them in the same order, and multifarious changes, as before the learning of the astronomer had been disseminated? Don't rivers run limpid and serene, winds now in zephyr, storms, and cyclone, without any practical benefit to the lands, men or sea, who were instructed by the astronomer? Don't ships play the waters, and rail-roads run in blackness as well as in light, in the severity of calm as well as the bluster of storms, in the face of learned revealments of their nature, which have still to reach so far as to develop their elementary conditions?

What is the elementary condition of disease? Bennet many years ago asked the question, and, also affirmed that rheumatism is a word used by physicians to hide their ignorance. What says Niemeyer on many theses involving the essential conditions of persons when diseased? Take the vague designation of Bright's disease as indicative: "It remains an open question whether the vascular engorgement and inspissation of the blood, which take place in the algide stages of cholera, induce obstruction of the renal capillaries from crowding together of the blood-corpuscles, and extravastion of plasma and blood into the tubules, or whether the inflammations of the kidneys, like the other inflammatory affections of the typhoid stage of cholera, be ascribable to infection of the blood." That is, beyond doubt, as clear as mud is to a geologist; it, very probably is pathological science, yet where the inlet is to either croupous inflammation, or the elementary conditions of disease remains for future discourse. Pathological exhibitions are eminently worth study. Yet of what practical use to the therapeutist?

Bundy has done more than Rokitansky, Romberg and others, in the practical benefit of medical men in relationship to sick people. By telling the effects of

drugs observed by him under stated conditions, and leaving others to try experiments, or not, at their own option, he has done more than all pathological anatomists have done, for therapeutical medicine.

FRANK A. RAMSEY, M. D.

KNOXVILLE, Tenn.

The Prophylaxis of Diphtheria.

I have just read with great interest your editorial on the "Collective Investigation of Diphtheria," and very heartily approve both the plan and the editorial summary of opinions. Allow me to congratulate you on your success in harmonizing what at first sight appeared to be irreconcilable views. The opinions, properly arranged in book form, will be of great value to the profession. I anticipate the perusal of the work will afford both pleasure and instruction. While commending the work as a whole most cordially, permit me to call attention to one item in the details which I think has not been quite fairly presented. Referring to medical prophylactics (p. 296) you say "their *modus operandi* is not hinted at." Now, if you refer to my report, I think you will find that I offer what I regard as a thoroughly reliable prophylactic, and substantially state that as I use the same remedial agents to prevent the development of the contagium in those who have been exposed, that I use in curing those who have the disease, there certainly appears to be more than a hint at the *modus operandi* of the medicine employed. It is quite true that there is no minute or elaborate examination of the therapeutic action of the agents used; but, as there are elaborate disquisitions on the therapeutic action of the remedies employed in curing diphtheria, the reference made fairly includes all such disquisitions, and as you are aware the space devoted to "6" precluded any lengthy dissertation on the subject.

I have called your attentton to the foregoing item, because, in my opinion, your remarks tend to detract from the reasonableness and reliability of the medical prophylactics, and occurring, as they do, in your summary of an exhaustive examination of the subject, therefore of great weight, many practitioners will be deterred from using "medical prophylactics" in which, from considerable personal experience, and from the experience of many other physicians reported to me, I have the strongest confidence. Even if the plan recommended should on further testing it be found to be untrustworthy, no injury would be done by trying it; but, *per contra*, if it be, as I claim it is, entirely trustworthy, then dissuading practitioners from its use would result in incalculable injury.

I have simply penned in haste the thoughts that presented themselves to my mind when reading your editorial. If you think the views advanced of sufficient force and importance to warrant you in reviewing your remarks on that particular item, in the interest of humanity, I shall be pleased; if not, I shall not be displeased if you consign this paper to the waste basket, as I have no personal feeling in the matter.

T. R. BUCKHAM, M. D.

FLINT, Mich.

Numskulline.

Not having had time to express my gratitude to and admiration of your correspondent in the April number, "Omphalus Strepitus," I seize the present moment to do so, regretting my inability to do the subject justice.

The whole body of the profession, regular, irregular, patent medicine inventors, proprietary and trade-mark men, in truth, all persons in any way connected with the making, selling, giving or taking medicines, should come forward immediately and in some public way acknowledge their obligation to the discoverer of the final and finishing of the labors of the healing art, the discovery of numskulline.

It is admitted by all philosophers that there is no perfection in human knowledge, and a few liberal thinkers, who are in advance of the age, claim that there is no perfection in nature; that all things are in a progressive stage.

There is no doubt that the discoverer of numskulline used all the articles known in the kingdom of therapeutics in the formation of that compound.

Now, it is an accepted fact that in the treatment of disease the influence of the mind and the effect of the imagination has a great deal to do with success.

Had the discoverer named a number of articles which are doubtless in it, one of which I call to mind, which is much needed—I have reference to santonine—and if he would only kindly satisfy the public that that remedy is in the preparation, his labor would be as near complete as it is in the power of a mortal to achieve.

Badinage aside. Admitting that the terminal suffix is legal, according to the law of chemical and pharmaceutical nomenclature, the free and accumulating use of "ine" has exercised an unfavorable influence upon the public mind in all classes of society, even with intelligent and scholarly laymen, to say nothing of the shrewd and observing minds who make up a large part of the middle class of society in this country, and is thereby calculated to breed a contempt for the profession, its labors and its literature.

A. G. SMYTHE, M. D.

BALDWYN, Miss.

Cascara Sagrada, Compressed Troches.

Cascara Sagrada. I have used this drug in the form of fluid extract, prepared by Parke, Davis & Co., and found it very reliable. In cases of chronic constipation it is desirable to have at command a remedy which can be frequently used without danger of producing any of those ill effects which the constant use of aloetic purgatives sometimes occasions; and such a remedy we seem to have in the cascara extract. In half-drachm doses, given once, twice or three times a day, with syrup or glycerine, it has proved efficacious, and acted without griping or other unpleasant effect; but the taste is extremely nauseous, and I have not been able to disguise it sufficiently to render it probable that children would take tt unless forced to do so. For ladies, also, this forms an objection to its use, which I hope the makers may be able to obviate.*

Compressed Troches of Chlorate of Potash.—This is a very elegant form, and very superior to ordinary lozenges. The troches will be found useful in almost all cases of throat affections accompanied by inflammation. I have myself derived the greatest benefit from them in a severe attack of pharyngeal and laryngeal inflammation.

H. NELSON HARDY, F. R. C. S. E.†

LONDON, ENG.

*Mr. Hardy is, evidently, not familiar with Cascara Cordial.—ED. GAZ.

†Late Surgeon City of London and East London Dispensary, etc.

The Therapeutic Gazette

WILLIAM BRODIE, M. D., Editor.

ASSOCIATE EDITORS:

J. J. MULHERON, M. D. and A. B. LYONS, M. D.

DETROIT, MICH., August 15, 1883.

GEO. S. DAVIS, Medical Publisher, Box 470.

SUBSCRIPTION PRICE (Postage Included) $1 00.

PRICE OF BACK NUMBERS:

Single Copies, each. .....$ .10
(Vol III., No. 1, is now out of print.)

BOUND VOLUMES.

Vols. I. and II. (quarterly), paper cover, each .40
" " " board " " .75
Vols. III. and IV. (monthly), paper cover, each 1.00
" " " cloth " " 1.50

POSTAGE EXTRA.

Foreign subscription may be ordered through our Great Britain agent, Mr. H. K. Lewis, Medical Publisher and Bookseller, 136 Gower street, London. Price 5s. Remittance may be made either by Postal Order or Stamps.

Price to Foreign Subscribers direct (postage included) $1.25 (5 shillings.) English postage stamps received on remittances.

Is Quinine an Unstable Compound?

A PAPER recently read before the Indiana State Pharmaceutical Association, by J. U. Lloyd, presents some curious speculations with regard to the possible instability of quinine when made up into pills, which have attracted some attention—more, perhaps, than from their intrinsic importance they actually merit.

Mr. Lloyd, in the first place, assumes the correctness of the results reached by Prof. Diehl in his recent analysis of the quinine pills of the market. Prof. Diehl found that the quinine contained in the pills subjected by him to analysis, was contaminated with from 12 to 34.5 per cent. of foreign alkaloids, which were assumed to consist of quinidine, cinchonidine and cinchonine.

The alkaloids were first extracted from the pills by treating with strong ether a solution rendered alkaline with ammonia. Before weighing, the residue was heated in a water oven for from 12 to 24 hours, and then was dried at a temperature of 230° to 240° Fahr. The crude alkaloid was then treated with 25 times its weight of ether, which should dissolve all the quinine. One-half (or a little more) of the ethereal solution was evaporated to dryness, and after being a second time dried at 230° to 240° Fahr. and weighed, was redissolved in acidulated spirit, and an estimation of the quinine it contained was attempted after the method of De Vrij, with solution of the iodo-sulphate of chinoidin. It will be perceived that the final result is liable to error from a variety of causes. The number of successive steps in the operation is so great that the results reached ought not to be accepted as conclusive without some process of control. No further examination seems to have been made of the portion of alkaloid which remained undissolved by the ether, but, except in two instances, the amount of this residue was quite inconsiderable as compared with the total alleged deficiency in quinine. No attempt was made to demonstrate the nature of the alkaloids forming the supposed impurity. It does not appear that even the simple and well-known tests of Kerner or Hesse were applied to the total alkaloids obtained, in support of the conclusions otherwise reached. Other analysts report that they have applied these tests to the alkaloids obtained from pills made by the same manufacturers, and that judged thereby the quinine was quite pure.

The process adopted to the exclusion of these familiar and trustworthy tests is one devised, some years ago, by Dr. De Vrij, but published with the following significant comments by the author: "Although I feel convinced that this process of estimating the amount of quinine in a mixture of cinchona alkaloids is not one which *even in the hands of inexperienced persons will give accurate results in a short time* (the italics are the author's) I have some hope that in the hands of experienced analysts it may prove a satisfactory one, if before applying it they study, as I have done, the action of the reagent upon solutions of definite strength of quinine, quinidine, cinchonine and cinchonidine."

Since quinine forms with iodine and sulphuric acid no less than seven different crystallizable compounds (Prof. Jörgensen) it is quite possible that under slightly varying conditions, different results might be reached in attempting to estimate the alkaloid gravimetrically as herepathite.

Finally it appears that when this method is applied to the estimation of the quinine contained in pure quinine sulphate manufactured by Powers and Weightman, the result is far from satisfactory. Prof. Diehl found in 100 parts of the sulphate 76.16 parts of anhydrous alkaloid—more, by the way, than he was entitled to expect—but, estimated as herepathite, only 71.34 parts of quinine. The purest quinine to be procured, tested by this method, contains, therefore, 6 1-3 per cent. of salts of "foreign alkaloids." With two exceptions the pills were reported as containing no more than two or three times this amount of impurity.

We have stated the facts at some length in order to justify our own deductions from them, viz., that even in the hands of experienced analysts, the method of De Vrij cannot be trusted in its results without corroboratory evidence. Unfortunately, Prof. Diehl's conclusions are not supported by any such collateral evidence, while we have the positive testimony of other analysts, who certainly were not biased in favor of the manufacturers, that the quinine employed by the same manufacturing firms whose pills Prof. Diehl examined, is free from any admixture of the other alkaloids.

Now we are in a position to consider the hypotheses of Mr. Lloyd. These have for their object to explain the alleged fact that quinine pills contain a notable proportion of the cheaper alkaloids of cinchona bark, in such a way as to save the manufacturers from the imputation of dishonesty. The motive, perhaps, is a praiseworthy one, but the method adopted for carrying it into effect is open to criticism. To call in the aid of familiar and acknowledged facts in explanation of any unusual phenomenon reported by a competent observer, is, of

course, not unscientific. But if a reasonable doubt exists in regard to the matter observed, the scientific method demands that attention be turned first of all to the question of fact, and above all, that no time be wasted in speculative reasoning until that question is fairly settled.

Mr. Lloyd assumes the fact—which seems to us not yet established—and then evolves from his imagination a plausible explanation. He has observed that in a single instance a quantity of golden seal which had been treated with an unusually liberal allowance of water, yielded more hydrastine and less berberine than another portion of the same drug that had not been so treated. *Post hoc, ergo propter hoc.* The berberine had evidently undergone chemical change in its prolonged contact with water, one of the products of the reaction being hydrastine. The precise conditions under which this remarkable transmutation takes place have not as yet been carefully studied. The value, mercantile as well as therapeutical, of hydrastine is so much greater than that of berberine that it seems strange that this clue should not have been followed up to results not only of the greatest scientific interest, but also of large pecuniary profit. One may see, by inspecting the chemical formulas of the two alkaloids, how easy a matter it should be to effect such a transmutation. By adding to a molecule of berberine, $C_{20}H_{17}NO_4$, two atoms of oxygen, and two equivalents of the radical methyl, CH_3, we shall have a molecule of hydrastine, $C_{22}H_{17}NO_6$.

It is true that other plants which contain berberine have not been induced by judicious watering to yield hydrastine, neither have the aqueous preparations of golden seal so largely employed at the present day, been observed to grow paler with age or to deposit crystals of hydrastine, but all such negative evidence is outweighed by a single positive observation, and besides, the principle involved is too broad to be overthrown by a trifling mistake in a point of fact in the particular illustration adduced.

If, thus, berberine may change to hydrastine by a reaction with H_2O, or the liquid chloral be transformed to a white crystalline solid by combination with the same chemical compound, why may we not suppose that quinine, under the long-continued action of this potent agent, may be changed into cinchonidine or cinchonine, or perhaps even to ammonia and sugar?

It is true that, in order to convert quinine into either cinchonidine or cinchonine, an atom of oxygen must be taken from each molecule; but water is a powerful agent (witness its terrible destructiveness in a steam-boiler explosion, and call to mind the conversion of berberine to hydrastine), and water is capable of combining with an additional portion of nascent oxygen to form hydrogen peroxide. What is more natural than that precisely such a change should take place in a pill mass? True, no such change has ever been observed to take place, either spontaneously or under the artificial conditions of a laboratory experiment. Quinine may be transformed into the isomeric quinicine by the application of heat, and similar changes have been produced in the other cinchona alkaloids; but up to the present time no chemist has succeeded in changing one of the naturally existing alkaloids into another, although the ablest chemists have devoted themselves to persevering experiments in this very direction.

Problems, however, which have baffled the ingenuity and skill of the experimentor, may receive a summary and, for the time at least, a satisfactory solution in the brain of an imaginative enthusiast—with a cause to support, and so lead may be transmuted into gold and quinine degraded to cinchonine, as an article of faith in the creed of alchemy. Chemistry only says "Prove thy faith by thy works."

It is easy to adduce arguments in defence of any theory. If water is nature's great agent for effecting physical and chemical changes, why may we not suppose that the moisture present in a quinine pill—or, quite as reasonably, the hygroscopic moisture sometimes retained in the sulphate of quinine of the market—is capable of bringing about chemical changes in the alkaloid? As a matter of fact, the quinine pills in question—even the softest of them—do not contain as much as the 7½ molecules of water of crystallization to which the salt is entitled. But, water failing to explain the assumed changes, there is the glucose which is employed as an excipient, and which may contain gypsum or alkaline salts, or even traces of free sulphuric acid—all of which may play a part in effecting the changes supposed to take place in the pills. Besides, who knows how many species of microscopic organisms, originators and promoters of fermentative change, may not find a nidus in so favorable a location as the interior of a sugar-coated quinine pill?

Seriously, we submit that a single experiment demonstrating that quinine has in any instance been changed into quinidine or quinicine, or anything else, under the influence of the ordinary constituents of a pill excipient, would be of a hundred-fold more value to science than all these empty surmises. Indeed, we feel like apologizing to our readers for having occupied so much space in discoursing upon so baseless a fabric of speculation. The results reported by Prof. Diehl suggest several lines of experimental research which may be followed up with profit, but science will gain nothing whatever from the reveries of men who attempt to evolve its truths out of their inner consciousness.

Remedies in Neuralgia.

DR. Chas. R. Francis, in a series of articles in the Medical Press and Circular, discusses the etiology, pathology and therapeutics of neuralgia. The latter division of his subject is particularly interesting, his discussion of it being extremely rational, regarding the pain as but a symptom of a pathological condition. The remedies which he advises have reference to a permanent relief of those conditions and to palliation. There are probably few diseases which are more empirically treated by the profession than is neuralgia. The necessity for immediate relief of the great pain frequently endured seems, in the majority of instances, to blind the practitioner to the necessity of attention to the fundamental cause. This empiricism is not at all times traceable to the fault of the practitioner, for the demand for palliation is so pressing that there will be found few patients who will submit to the endurance of pain during the tedious means frequently necessary to unseat the disease in its citadel, with a view to its permanent eradication. An intelligent treatment of neuralgia must regard it as a prayer of the

nerve for healthy blood, and the great desideratum of treatment must be the elimination of morbid matters to which these symptoms may be due, or the supply to the system a lack of material, the absence of which manifests itself in the pain.

Dr. Francis in discussing these permanent remedies mentions the benefit to be derived from electricity, from galvanism, quinine and arsenic. As medicinal agents, more particularly, quinine and arsenic demand his attention. Quinine is beneficial in neuralgia in two ways: 1st, as a nerve tonic, and secondly, as an antiperiodic. As a nerve tonic it is valuable in depraved conditions of the system characterized by anæmia. In the second place it is valuable in those forms of neuralgia which are characterized by regularity of intermissions. For the first of these purposes it must be given it tonic doses; for the second in large or antiperiodic doses. Probably very great mistakes are made in the exhibition of quinine in large doses for neuralgia. It may be laid down as a rule that quinine in anti-periodic doses is absolutely useless in all neuralgias which are not characterized by regularity in intermission. The only exception to this rule is in the case of neuralgia of the cerebral nerves, quinine being beneficial here, without any reference to intermittency.

Arsenic is valuable not only in neuralgia of an intermittent type, but also as a nerve tonic, given with a view to adding tone to the nerve fibre. The rules which regulate its administration are practically the same as those which obtain in the case of quinine, the only exception being in the case of the cerebral nerves, large doses of arsenic not being beneficial in neuralgia of these.

Dr. Francis found great benefit from counter-irritation in the form of flying blisters, and particularly in the neuralgic pains common to nervous, sensitive women. These flying blisters he, however, found to be most beneficial where there is effusion between a nerve and its sheath, or a thickening of the latter. This condition generally obtains in sciatica in which complaint blisters applied above and along the course of the seat of pain are very valuable adjuvants. They are also decidedly useful in the intercostal neuralgia, which remains as a sequel of shingles.

Dr. Francis places great stress upon the necessity of hygiene and abstinence from alcoholic drinks and excesses in the matter of diet. The patient who refuses to give the most scrupulous attention to these particulars will take medicine in vain, neuralgia being a symptom of weakness, and the tendency of those excesses is to aggravate this condition and to this extent militate against the success of medicinal agents. Great patience and perseverence are necessary in the treatment of obstinate neuralgia, and the patient must be admonished of the necessity of these virtues.

The interesting and practical article closes by inculcating on the profession the adoption as a motto, of the word "perseverando."

In this connection we also call attention to an article in the recent number of the Medical Record, by Dr. D. N. Camman, in which he extols the value of menthol as an external application in neuralgia, regardless of the nerve or nerve-trunk attacked—facial neuralgia, lumbago, fugitive pains in the chest, intercostal neuralgia, pleurodynia and gastralgia. Dr. Camman's testimony is very strongly corroborative of that of Dr. F. E. Stewart, whose reports as to the value of a solution of menthol in the bromide of ethyl as an extenal application in neuralgia, are doubtless familiar to our readers.

Cholera.

THE telegraphic reports of the occurrence of a disease in Egypt presenting many of the characteristics of cholera are sufficiently grave in their nature to excite apprehension. The outbreak occurred in a few cases in Damietta. These were speedily followed by others, until in the course of a few days the deaths amounted to an average of one hundred daily. When it is considered that this city numbers only 20,000 inhabitants, the prevalence and fatality of the disease will be duly comprehended. Strict precautionary measures were immediately instituted as soon as the nature of the affection was suspected. Fortunately there were in the vicinity a number of British troops who have remained in Egypt since the late war. These at once proclaimed the *cordon sanitaire*, and rigid instructions were given to shoot any of the unfortunate inhabitants of the infected district who should endeavor to escape. The result of this extreme, though somewhat cruel means of restricting the disease, was to confine it for a certain time to its original limits. Soon, however, these limits were exceeded and fresh foci of the disease occurred in adjacent districts. Fortunately, thus far these later districts in which the disease has occurred have not been increased, and although later reports announce the occurrence of several cases at Alexandria, these few have not proven to be the centers of fresh infection, the disease not having spread in that city.

There is some ground for hope in certain peculiarities of the present outbreak which have been detected by careful observers. These peculiarities have justified some of these observers in proclaiming that the disease is not of the true Asiatic type. This belief is, of course, strengthened by the fact that the present occurrence did not, like previous epidemics, have its origin in Asia. It has been asserted that the disease is only a severe type of epidemic dysentery. It is certainly very much to be hoped that this latter and more favorable view of the case may prove to be the correct one. These vestiges of hope have, however, not prevented the western nations from taking due precautions against the spread of the disease, and very active measures were promptly instituted in the European countries most likely to be attacked in the event of the spread of the disease westward. In the light of past experience the necessity of complete sanitation is very apparent. The little we know of cholera confirms the belief in its greater malignity under bad hygienic conditions. It is notoriously a fact that it finds its victims among the inhabitants of filth and squalor. It is fortunate for us in America that this timely warning has reached us, and it behooves the profession to arouse each municipality to a sense of the great danger which threatens. For all practical purposes it will certainly be well for the people of this country to regard the disease, as it is at present decimating the unfortunate cities of Egypt, as true Asiatic cholera. By thus regarding it they will be all the more energetic in their efforts to remove those causes upon which the true variety of cholera thrives. While we may earnestly hope that the epidemic, if it shall

prove to be an epidemic, will not reach these shores, we shall, after the due warning which has been given us, be doubly culpable if it shall find us unprepared for its reception.

It may not be premature for us at this time to request from such of our readers as may have had experience in the treatment of cholera in the epidemics which have visited this country, to favor us with the methods of treatment which they found most successful during those epidemics. The great bulk of practitioners now in active duty in this country have, of course, not had the experience which will warrant them in giving any information on this point. There are, however, a not inconsiderable number who have had such experience. We are sure that the profession at large will be deeply grateful for any such information as these gentlemen may be prepared to volunteer. In view of the possibility of the occurrence of cholera in this country during the present season we would earnestly request the results of the experience of the gentlemen referred to.

Scarcity of Original Workers.

IT is customary for foreigners to regard the profession of this country as imitators rather than as originators. Doubtless there exists too much reason for this reflection, although we think the facts warrant the statement that we are less dependent for our knowledge of newly discovered truths upon our transatlantic brethren than we formerly were. The wise man does not chafe under criticism. He will rather analyze it, and honestly endeavor to remove the grounds for honest criticism. Such being the case, it will be profitable for us to inquire into the causes of the comparatively few original workers which a profession numbering upwards of a hundred thousand members in this country has produced.

In the first place, the profession starts out very seriously handicapped, as compared with their European brethren. The average of literary training in this country is comparatively low, and the results are a less able corps of trained minds—minds qualified through a course of logical reasoning to trace causes to effects and effects back to causes. In the absence of such ability empiricism must largely prevail, and, as a matter of course, original work must correspondingly suffer.

Another cause tending to diminish the number of original workers in this country exists in the fact that the profession is comparatively poor. In Europe the difficulties in the way of obtaining a medical education operate very largely as a barrier against the admission to the profession of young men not possessed of considerable means. In this country the road to medical honors is all too easy. The length of time and amount of capital required to enable a young man to graduate in medicine are scarcely more than would be necessary to qualify him for a trade. The profession, therefore, offers a ready means of livel'hood for those who are comparatively poor, and the great bulk of the profession in this country are composed of men of this class—men to whom the profession is rather a means of direct livelihood and money-making through necessity, than of men who have embraced the calling through love of scientific pursuits. This being the case, the great bulk of the profession are engrossed in the more mercantile part of the duties of a physician. The energies, therefore, required in original work are consumed in the more practical part of the profession, as it affects the personal interests of the practitioner.

The absence of State patronage has a very deleterious influence on progress, whether in medicine or the more exact sciences. It by no means follows that the young man of capital, on entering the profession, is better qualified than his more impecunious brother, to prosecute original work. On the contrary, the reverse of this is usually the case. But leisure is absolutely necessary, and unless the opportunity for leisure is afforded, either from the State or through a patrimony, the energies of the young man cannot be devoted to original work.

We think we have enumerated in the three causes which we have above given, the principal reasons for a backwardness in original work, and for the paucity of original workers when compared with the vast numbers engaged in the practice of medicine in this country. With age and increasing wealth these causes will be very largely removed. That they are being removed year by year, is becoming more and more apparent; and it requires no very optimistic frame of mind to predict the time, in the very near future, when the profession in this country will not be obliged to depend for its original facts upon which to base the practical work for which it is so noted, upon their European brethren.

But the causes which we have mentioned as operating to diminish the number of original workers, though quite valid under ordinary circumstances, are by no means sufficient to justify the absolute dependence of even those most circumscribed by them, for original facts. The busiest practitioner should feel it all the more incumbent on him to contribute from the large storehouse of his experience something which those less busy cannot be expected to have noted. It would be very profitable to the physician himself, as well as to the professional whole, of which he is a part, for every general practitioner to adopt some special subject for study and observation. Such a study would give us specialists of the better class, and would free us from the domination of the one-idea men, who have caused specialism to be regarded with so much suspicion by the broad-minded, many-sided physician. Let each adopt a specialty, and direct his experience and observation in general practice to its advancement, and he will find his opportunities for original work greatly multiplied.

Abrus Precatorius—Jequirity.

THIS newer addition to the armamentarium of the ophthalmologist is attracting more than the usual modicum of attention given new remedies of such a comparatively limited range of applicability. We reproduce in our present issue, pages 345 to 352, the results of trials to which it has been subjected, as well as reliable information touching its botanical history. It will be noted that subsequent experiments with the drug have developed properties which promise a much larger field than it was originally supposed to be adapted to. Originally employed as a substitute for gonorrhœal virus as an application in pannus, with a view to exciting wholesome inflammation, its use has already extended to the treatment of granular lids not necessarily complicated with fully developed pannus. The results

of the limited experiments made, will, we believe, warrant further trials, due caution being, of course, always observed in the use of this powerful agent.

Jequirity had for many years been used in Brazil empirically, as a remedy for granulated eyes, and it came to the knowledge of the illustrious De Wecker, of Paris, France, through a patient who had been successfully treated by it. The following is the formula for the preparation of the infusion: Pulverize 16 beans, macerate them in 250 grammes (℥ viij) of cold water during 24 hours, then add 250 grammes (℥ viij) of hot water and filter immediately after cooling. The infusion is brushed on the inner surface of the lids or applied on a linen compress to the surface of the lids. Thus applied, it will produce in a few days a decided croupous and purulent conjunctivitis, which on subsiding, leaves the trachomatous lids relieved of the granulations. The intensity of the inflammation may be controlled by the frequency and strength of the applications. Applied too frequently or in too concentrated form the inflammation becomes diphtheritic in its character. De Wecker's theory of its action is that it develops a vegetable ferment on the diseased conjunctivæ which prevents the evolution of new granulations and is destructive to those already formed.

We would suggest a cautious trial of jequirity in chronic inflammations, of a catarrhal nature, of mucous membrane wherever located. Its property of exciting acute inflammation of limited duration would certainly suggest its use in such conditions, *e. g.*, in chronic gonorrhœa, uncomplicated with stricture, vaginal leucorrhœa, etc. An agent which will excite an inflammation which running its course, will, as it were, smother the original depraved process, has been felt to be a desideratum in such cases. Perhaps jequirity may be found to supply it. A perusal of the articles on the subject which we have reproduced in our present issue will afford a guide to its careful employment.*

Jamaica Dogwood in the Nervousness of Consumption.

ANY physician of any very considerable experience in the treatment of consumption will agree with us in the statement that one of the most annoying features of the disease is the nervousness, so-called, or extreme irritability, which often characterizes the latter stages of the disease. Consumption is popularly supposed to be a disease in which the nervous system is either held in abeyance, as to any manifestations of its existence, or that it is bathed in a condition of indifference, which, extending itself to the character of the patient vests him with attributes which are not ordinarily supposed to be strictly human. Doubtless there is in the condition of the blood which obtains in consumption, particularly in its early stages, a something which manifests itself in a peculiar clearness of the mental faculties, a quickness of sympathy and the perceptive faculties and amiability of disposition. But we have at present chiefly to do with the morbid erethism which generally, sooner or later, succeeds this condition and which reveals itself after the tuberculous process has thoroughly settled itself upon the lung tissue, and in the stage of hopelessness as far as all recovery is concerned. The remedies which have at different times been suggested for the relief of this condition are legion, for they are many, and they have run the scale from the bromides to the opiates. This condition manifests itself in restlessness, sleeplessness, and morbid sensitiveness to external impressions. The well known-properties of opium would, of course, very naturally suggest its administration under such circumstances. By obtunding the nervous sensibility it allows the diseased process to continue its ravages, the patient being insusceptible to them. This in a hopeless case, is doubtless a condition very much to be desired, but the hopelessness of a case will scarcely justify the physician in its empirical treatment. It is his duty at all times to do the best possible thing under the circumstances. Opium in health and in disease works alike the same constitutional effects, and we have as a result of its administration in consumption the same disturbance of the digestive apparatus that we have when the drug is taken purely as the result of a vicious habit—a disturbance which is all the more to be avoided because of a diseased process which is but aggravated by it.

The above general remarks have been casually suggested from a recent study of the physiological action of piscidia erythrina. The physiological properties of this drug would very naturally suggest it as a remedy in this disease, and we are pleased to note that the results of clinical observation, both in our own experience and in that of others, fully corroborate the value as indicated by these properties. We are fully justified, therefore, in the light of the evidence before us, in recommending to the consideration of our readers a thorough trial of Jamaica dogwood in the condition of nervous irritability to which we have referred, as occurring in hopeless consumptives. It certainly favors euthanasia, the grand desideratum in the treatment of these cases.

*In this connection we would note the fact that Messrs. Parke, Davis & Co. have secured a consignment of jequirity from which they will be pleased to furnish those who may desire it, at prices which will just about cover the cost of importation. The seeds are put up in packets containing from a quarter of an ounce to an ounce each, and the prices of which are: $1.00 for ounces, 50 cents for half ounces and 25 cts. for quarters. On receipt of price they will forward packages postage prepaid. Address Parke, Davis & Co., Detroit, Mich.

The Detroit Art Loan Exhibition.

THIS exhibition will be opened September 1st and will continue during the months of September and October. The arrangements being made for it are of a most excellent order and are well nigh completed. A brick building containing 26 rooms, and 2400 running feet of wall room has beenbuilt after the plan of the Centennial art annex, and at a cost of $15,000. Over a thousand paintings recognized to be of the highest artistic merit, together with other exhibits, statuary, etc., will be displayed. During the progress of the exhibition the twelve lines of railroad centering in this city will run excursion trains at reduced rates. The admission price to the exhibition has been fixed at 25 cents. The opportunity thus afforded of witnessing what promises to be the finest art exhibition ever held in the west will, we trust, be generally improved. Such of our readers as have not yet taken their annual vacation will find it profitable to "take in" our city and this exhibition. Any further particulars which may be desired can be secured by addressing, with stamp, Detroit Art Loan Association, 46 Moffat Block, Detroit, Mich.

Errata.

WE desire to correct a typographical error which has doubtless been detected by the reader of our summary of the replies received to our questions touching diphtheria. It is to be found in the last paragraph in the use of the word "asthenic" in the first line. It is clear that "sthenic" was intended.

Through one of those unaccountable confusions of types which sometimes occur in a printing office, we were made to speak of the work conducted in the various "restion" of the American Medical Association. Of course, the reader has understood that "sections" was meant.

Book Reviews and Notices.

A Treatise on Therapeutics. Comprising Materia Medica and Toxicology, with Especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. Wood, M. D., Professor of Materia Medica and Therapeutics and Clinical Professor of the Diseases of the Nervous System in the University of Pennsylvania; Physician to the Philadelphia Hospital; Member of the National Academy of Science, etc. Fifth Edition, revised and enlarged. 1883.
Philadelphia: J. B. Lippincott & Co.

This work is dedicated to Dr. George B. Wood, LL. D., of whom it can be said he had no peer in the department of materia medica, as applied to the practice of medicine. The author of the work before us was his pupil, and educated under and associated with such a master, he could not well fail to give to the American physician a valuable work on the subject to which his book is devoted.

In the year 1875 the first edition of this valuable work appeared. Four years later (1879) a second edition was issued; in 1882 another; in 1883 still another; and now, six months from the issuing of the fourth edition, a fifth is required. These facts of themselves are sufficient to prove the estimation in which the book is held. Based as it is upon the physiological action of remedies, the book appeals at once to the requirements of the practitioner, and furnishes him with the information he not only is in search of, but practically needs.

The subject is discussed in two parts: First, drugs; second, forces. Under the first head, division first, we have systemic remedies. This is subdivided into, first, general remedies; second, local remedies. Division second is devoted to non-systemic remedies. Part second: Forces. Herein are discussed caloric and electricity; how to use the former, and how to use and apply the latter.

An appendix is added in which the art of prescribing medicine is given, and also tables of weights and measures, in the terms both of the pharmacopœia and of the metric or French system. The whole concludes with a full index.

Our time has not permitted a critical reading of the whole work, but in what we have examined we fail to find the use of the capsule in the administration of remedies The author says, page 80, in referring to the administration of quinia, "that the 'sugar-coated' pills kept in the shops should be avoided" as uncertain in their action, for unless used when soft and fresh, they not infrequently pass through the bowels unchanged. In this we fully agree with him and also "when rapid action is desired it should be given in solution or in powder." We believe all of the alkaloids should be given either in powder or solution, for the sooner a remedy acts the more certain are its results. Next to a solution which we prefer comes the powder. This can be administered in a capsule and the gelatine of which it is made is readily dissolved in the stomach. Of course the physician must be largely guided by the patient as to the form in which the remedy is given, but if the choice be left to the prescriber, solutions should stand first, powders second and pills third. To return to the work before us, we feel that it is worthy our highest approbation, and we cordially commend it to our readers as the best and latest text-book on the subject.

Working Bulletins for the Scientific Investigation of the Newer Materia Medica. A Plan to Promote Progress in the Science of Pharmacology, and consisting of a collection of all procurable information as it has appeared in contributions to medical literature, bearing on the botanical origin, history, chemical constituents, pharmaceutical preparations, adulterations and therapeutic properties of the several drugs considered. Vol. I. Issued by the Scientific Department of the Laboratory of Parke, Davis & Co., Manufacturing Chemists, Detroit, Michigan. U. S. A. 1883.

The publishers in issuing this Working Bulletin to the medical profession are prompted by a desire to harmonize the demands of science with trade interests. They take the position that there is nothing incompatible between the interests of the medical profession and those of the legitimate manufacturing pharmacist, and that those interests can clash only when either of the parties desert the standard which the written codical rules and established usage have fixed for its guidance.

In the matter of the Newer Materia Medica they seek to create no fictitious demand, but simply to operate in the pharmacist's legitimate sphere in developing the medicinal resources of nature. Having done their part it remains for the physiological investigator and the active working practitioner to complete the work. Should the latter fail, either through an indifference which is fatal to such scientific work, or through the positive worthlessness of the articles which they are instrumental in placing before them, theirs must be the pecuniary loss. Realizing the risk which they thus take, they are as careful as they may be in the matter of the drugs which they place on the market, both as regards the selection of them for their inherent value and of their pharmaceutical preparation.

In the Working Bulletin they aim to publish all attainable knowledge regarding each drug discussed. The information which they would give embraces chiefly the history of the plant, its botanical origin, chemical composition, pharmaceutical preparation and therapeutic uses. It will be found to contain such unfavorable reports as may have been submitted as well as the favorable reports. It is intended as a guide to those who may desire to prosecute further experiment with the drugs discussed, and to that end it omits nothing they have been able to collect which would be of interest to the investigator.

In the volume herewith submitted they have presented the reports on only a few of the newer drugs. This will be followed at regular intervals with other volumes until the whole field of the Newer Materia Medica has been covered, and thereafter such new drugs as may appear, will be similarly treated.

Sixteen new remedial agents have been critically examined and what is known of their value has been fully given. The botanical and English names are given and the text is illustrated by cuts taken from the plants themselves, in which the component parts from the flower to the adult wood are microscopically displayed. The publishers will supply separate copies of the work to those who are sufficiently interested to apply for them, and will be gratified to receive from the profession any practical information concerning any and all new drugs. The volume before us is a handsome specimen of typographical art and the binding is equal to the best.

The Microscope and its Revelations By Wm. B. Carpenter, C. B., M. D., LL. D., F. R. S., F. G. S., F. L. S., Corresponding Member of the Institute of France and of the American Philosophical Society, etc., etc. Sixth Edition. Illustrated by twenty-six plates and five hundred wood engravings. Vol. II.

New York: Wm. Wood & Co.

This is the May number of Wood's Library of Standard Medical Authors and the fifth year of their publication. The first volume was taken up chiefly in matters pertaining to the microscope and its application to the purposes of science and the examination by it of the lower vegetable kingdom. The second volume is devoted to the examination of the lower grades of the animal kingdom, extending upwards to the higher ones. There is also a chapter on the application of the microscope to geology and polarization. An appendix is added giving the new and later improvements on the instrument, thus making the work a complete one. A full index is added, and is just what the general reader wants, as by it he can readily find (provided he has the work) any, and full information upon the subject he may have under examination. The engravings are well cut and fully illustrate the text.

PAMPHLETS AND ANNOUNCEMENTS.

Pemphigus and the Diseases Liable to be Mistaken For It.

The Treatment of the Various Forms of Acne.

Hints on the Treatment of Some Paraietic Skin Diseases. By George H. Rohé, M. D., Prof. of Hygiene and Clinical Dermatology; Col. of Physician and Surgeons, Baltimore; Member of the American Dermatological Association, etc.

Fifth Annual Report of the State Board of Health of the State of Rhode Island, for the year ending December 31st, 1882, and including the report upon births, marriages and deaths in 1881.

Providence: 17 College street.

Physiology of Digestion with Reference to the Treatment of its Functional Disorders. Adapted from Claude Bernard; Murchison W. Roberts; Lauder Brunton and J. Milner Fothergill, and Compiled for the use of the General Practitioner. By M. H. Lackersteen, M. A., M. D., LL. D., etc., Member of the Chicago Medical Society, Chicago, Ill.

Twenty-Third Annual Announcement of the Bellevue Hospital Medical College, Foot of Twenty-Sixth Street, New York City, 1883-4. Session begins on Wednesday, September 19, 1883.

Fourth Annual Announcement of the Michigan College of Medicine, Corner of St. Antoine and Gratiot Avenue, Detroit, Mich., for the year 1883-4 with Catalogue. Session begins Tuesday, September 4, and continues six months. Apply to Dr. J. B. Book, M. D., Registrar at the College Building or the Secretary, Dr. Daniel LaFérte, corner First and Howard.

Ninth Annual Announcement of the Med. Dept. University of Tennessee Nashville Med. College. Nashville, Tennessee; Duncan Eve, M. D. Dean. Session of 1883-4.

Twenty-Third Annual Announcement of the Chicago Medical College, Corner of Prairie Avenue and Twenty-Sixth Street, Chicago, Ill., Session of 1883-4. Dr. Lester Curtis, Secretary, 1,558, Wabash Avenue.

Announcement of the Third Annual Session of the Medical Department of the University of Denver. Denver, Colorado, 1883-4. Term commences October 2, 1883, J. H. Kimball, M. D., Secretary.

Sixteenth Annual Announcement and Catalogue of the Detroit Medical College, Detroit, Mich. Session of 1883-4 begins September 12, 1883, H. O. Walker, M. D., Secretary.

Ninth Annual Announcement of Columbus Medical College, Columbus, Ohio. Session of 1883-4 opens September 12, J. M. Dunham, A. M., M. D., 198 East Town Street, Secretary.

Annual Announcement of Trinity Medical School, Toronto, Ontario, Established 1850. Session of 1883-4 opens October 2, and continues six months. Thomas Kirkland, M. A., Secretary, 332 Jarvis Street.

Annual Commencement of the Kentucky School of Medicine Louisville, Ky., June 26, 1883. From Courier-Journal.

New Facts in Gynæcology. By P. J. McCourt, M. A., New York City.

The Polyclinic, a Monthly Journal of Medicine and Surgery. Conducted by the Faculty of the Philadelphia Polyclinic and College for Graduates in Medicine. Published monthly, one dollar per annum. Vol. 1, No. 1.

P. Blakiston Son & Co., Publishers, 1012 Walnut St., Philadelphia, Pa.

We are glad to know that there is yet room for another medical journal in the city of Brotherly Love, and the Polyclinic has our best wishes and exchange.

The Atlantic Monthly for July is on our table with the compliments of the Publishers, Messrs. Houghton, Mifflin & Co., Boston, Mass.

It is a capital number and full of choice reading. Terms $4.00 per annum, single copies 35 cents.

Vol. 8. No. 1. Annals of Anatomy and Surgery for July is received and is an excellent number. Its path is different from all other medical journals. Its subjects being confined exclusively to Anatomy and Surgery, with the exception that each number contain a chapter of Historica and Bibliographical Sketches of the old Masters of Anatomy and Surgery. By Dr. G. J. Fisher. Terms $2.00 per annum. Lewis S. Pilcher, M. A., Editor, 4 Monroe St., Brooklyn, N. Y.

Therapeutic Progress.

The Local Treatment of Phthisis by Carbolic Acid.—From the interest the subject excites, I am glad of an opportunity to supplement at somewhat greater length, the remarks under the above heading in the Journal of July 2, 1881.

The primary dependence of the lungs on the external atmosphere, for their healthy nutrition, distinguishes them from all other internal organs, and makes apparent a certain resemblance between them and the skin: a resemblance not merely imaginary, for they are structurally identical in many points. And where they are so, it is evidently for the same physiological reasons; namely, to carry out an interchange which must increasingly continue, so long as vitality lasts, between the atmospheric constituents, and the particles which the lungs and the cutis alike bring to their respective surfaces, in the process of nutrition. By the lung-surface, is here meant the inner walls of the air-cells and of the terminal bronchial twigs.

The relationship of the skin to the surrounding atmosphere is one of great importance. In the many varieties of skin disease which occur, there are several which, undoubtedly, arise entirely from external agencies directly impinging upon the part affected,

and producing the abnormal appearance it presents; and we may go further, and say of the large majority of skin affections which are set down to internal causes, that very many of them evidence, by their amenability to local treatment alone, that external agencies have a power over them sufficient for their removal, even though their origin is supposed to be in altered or in some depraved condition of the blood; and the deeper thought that underlies even this latter truism is, that there are local skin conditions originating in external influences which have prepared those parts for more readily than others undergoing the structural changes which the altered or defective blood will set up; in fact, without which the blood could not manifest its deficiencies. It is a thought within a thought to attempt to tell why, for instance, the patches of psoriasis or eczema appear at any particular spot; but it is helpful to call to mind that in all diseases there are two distinct factors which have to be brought together, whose combined action is necessary for the production of the functional and structural changes which ensue. It is apparent in skin degradation—it is probably true in all internal *malaises*—and it is undoubtedly true in that special form of lung disease we call phthisis, and it may be in all the other forms. In consumption, we have a predisposing condition of the lungs, which may be more precisely described as a state of lung-development, that is, of cell-growth, defective in one or more points, either inherited or the result of insufficient surrounding sanitary conditions, and thus not fully commensurate to do the work they are called to maintain, or to contend against the malign influences which at times are brought to bear upon them. Now what are these malign influences? They come to the lungs directly through the medium of the atmosphere, which carries them almost without impediment into the very heart of the tissue, no filtering them or minimising their quantity through other media, as when they pass along with food into the stomach and are subjected there and further on to so many processes, that their individuality or power of working any changes on their account is as a rule lost. Giving these malign influences another name and calling them germs (and surely we may do so with the knowledge we have acquired on the subject), we are brought at once to reason on their *modus operandi*, when they impinge upon a soil prepared for them—in other words, in a receptive condition—whether in the lungs or elsewhere; and our reason is founded on analogy. How do another set of germs act when they alight upon a surface freely exposed to them, where formative material on a large scale is being elaborated as on the stump of a recently amputated limb, or the raw surface of a burn? The action of these germs is to arrest the vital processes of repair, not in its earliest stage, but somewhere along the line just where cell-growth is passing from the general to the particular, to become a special form of tissue; and the blood-corpuscle which was about to be—or had recently been—laid down as an atom in the building up of cellular tissue, or connective tissue, is turned aside into the pus-corpuscle, which is in other words but a blood-corpuscle deprived of its own vitality, and breaking up after it had undergone certain transformations through the action of the sporule of a fungus upon it.

Before applying this reasoning to what takes place in the lungs in phthisis, we must allow the truth of another of the theories which is now pretty well established as a fact, with regard to germs; that is, the specific qualities which many of them possess. It would take up too much space to give all the reasons in favor of this view; but if it be granted (and how we can account for diphtheria, typhoid or cholera on any other supposition it is difficult to see), then the resemblance of the action of germs in the lungs to the action of germs on the fauces, in diphtheria for instance, may be thus traced. The air-cells of the lungs and the finer twigs of the bronchial tubes, weakened by long exposure to a vitiated atmosphere, or not originally in all parts well developed from hereditary causes, receive at some time an air charged with specific germs; and these latter alight on the cell-walls, and put a stop to the progressive changes taking place in those blood-corpuscles with which they there come into contact, and thus arrest, to a large extent, is put to the perfecting of new material, whilst yet the old and effete continues to disintegrate and pass away. Healthy formative material becomes for a time the nidus, out of which the sporules of a vegetable organism multiply.*

But it is not the ordinary non-specific germ, such as we meet with in every suppurating surface, but the particulate one, which has characteristic properties of its own, which is the producer of phthisis. When it finds an entrance and a feeding ground prepared for it, and above all, certain atmospheric conditions of temperature and moisture,† it rapidly converts to its own growth and material development the formative material which the blood has brought to the walls of the air-cells. The development of the tubercular germ proceeds in this way to the stage of reproduction, and there stops. The parent germ then loses its vitality and disintegrates, and it is this disintegrated germinal matter that constitutes the purulent expectoration of phthisical patients. It has, however, left its seed behind it, to go through the like stages at the expense of normal tissue.

Looking at the origin and course of phthisis from the above point of view, how should we plan our treatment? Firstly, we want a weapon which shall be quickly fatal to our enemy; and, secondly, we must bring it into direct contact with the foe. These are the two problems we have to solve, and they are surrounded with great difficulties. May we say at least that we are in the right track at last? We are experimenting on the best method of reaching the lungs directly through the trachea, and we are casting about to find the best germicides. These are the specific weapons of our warfare. The auxiliary ones remain the same as they have been for some time—abundance of fresh air, purity, and dryness of the same, and carefully selected diet.

The attempt to reach the air-cells by direct inhalation of the medicine we want to apply, need not be considered an insuperable one. To continue to do so only through the medium of vapor or steam is a mistake, for the reasons stated in my former paper, the medium itself has proved injurious, and therefore has acted as a hindrance in the way of successful prosecution of this form of treatment. Most medicines can be triturated or in some way reduced into particles lighter than air, and thus become capable of inhalation if brought into close proximity with the entrances of the air-passages.

That which at present awaits discovery is, what particular agent is capable of destroying the germ which sets up phthisis. At present, we are trying carbolic acid. We do this; reasoning from analogy, we have found that it exercises a deterrent action on the development of pus in other parts of the body, that a healing process will go on under an atmosphere of carbolic acid more rapidly than without it; and therefore we conclude, if its presence is a check to all other than a normal action where an outward lesion is being repaired, it will have the like effect on lung-tissue when in a diseased state.

I admit at once that the two conditions can be shown in many respects to be dissimilar; but there is sufficient parallelism for us to advance a step further in the same line of argument, and urge that, though carbolic acid may not prove successful in checking tubercular deposit with its attendant results,

*The terms, "blood-corpuscles" and "formative material" are here used indifferently, for it is impossible to define at what stage from the moment of the blood-corpuscles escaping the vessels to their changed condition as germinal matter, the micrococci of a fungus act upon it.

†That certain conditions of temperature and moisture are necessary for the development of germ-life has been long known; but it is only lately that we have arrived at the conclusion that each of the specific germs has a temperature and moisture of its own, without which it cannot burst into active life. This holds true of the phthisis germ, as well as of the diphtheria and cholera germ.

and so permit healthy action to prevail, yet it is only a question of the substance used, not of the principle involved. Why have the pine-forests of Brittany proved so beneficial to many consumptive patients? or why has sulphur-inhalation arrested the disease in many others? Are we to disbelieve these things, and assert that the beneficial results were due to other causes? I am not inclined to do so, but firmly believe that the continuous inhalation of an air moderately impregnated with some perhaps yet unknown vegetable or mineral product will ultimately prove the cure of phthisis.

But where are we to find the specific mineral or vegetable which is to do this? We can but grope on, testing and trying various ones. We may not be far from the needed substance, if we follow on the lines indicated by the good results which every now and then follow the inhaling of creasote and other preparations from resinous exudations and of sulphur.

These few thoughts on a subject of pressing importance—for there can be little doubt that phthisis is on the increase—are written for the sake of directing attention to the endeavors that are being made, both here and on the continent, to bring this formidable disease under a certain line of treatment—one, in fact, which has for its starting-point the assumption that phthisis pulmonalis is the product of the action of a specific vegetable sporule, and that it can only be successfully encountered by bringing it into direct antagonism with its own germicide.

In conclusion, I may say, as several inquiries have been made of me, that the paper by Dr. Williams which has given rise to the above remarks is published by Marples & Co., Lord Street, Liverpool; and the respirator he uses is made by Wood, instrument-maker, Church street, Liverpool.—Robert Hamilton, F. R. C. S., in *British Medical Journal*, July, 1882.

Cardiac Therapeutic Agents.—Prof. Germain Sée has prepared for the new edition of his important work, *Du Diagnostic et du Traitement des Maladies du Cœur*, an additional chapter on cardiac therapeutic agents and poisons in general, which gives an interesting summary and a classified view of recent researches on the subject, and states, in a clear way, the views of modern authorities on the physiological and therapeutic action of the drugs most useful in the treatment of heart disease. This extract has been published in advance in the Medical Gazette of Paris. Professor Sée begins by pointing out that, as medicines in general have a predominant action on one or the other great systems of the animal organization, cardiac drugs have, in particular, an elective action on such or such part of the apparatus of innervation which presides over the movement of the heart. This apparatus represents a very complex mechanism, duplicated in two systems which work side by side; a system of acceleration and a system of inhibition or arrest, this latter causing a slackening and arrest of the heart's action when excited. The different organs which constitute this apparatus extend from the heart to various parts of the nervous centres. In the substance of the cardiac muscle we find independent centres in communication with nervous ramifications which proceed from the cardiac plexus formed by the terminations of the vagus and great sympathetic nerves. Through the medium of these two systems of nerves, the heart is connected with the cord and the medulla; as, moreover, it is beyond doubt that pyscho-motor centres exercise a considerable influence on the function of the heart, it is necessary to admit the existence of connections between the cardiac centres and the vaso-motor centres of the medulla and cord, and certain corresponding centres situated in the cerebral cortex. Passing over the latter centres, concerning the localization of which physiology at present can give no information, we see that the different factors of the apparatus of innervation of the heart may be classified as follows: Medullar centres; spinal centres; the great sympathetic nerve; the trunk of the vagus nerve, including accelerator and inhibitory fibres, and intracardiac terminal ramifications of the same nerve, and special intracardiac autochthonic centres, also both accelerator and inhibitory. How has success been reached in recognizing with certainty the elective action which certain therapeutic or toxic substances exercise on one or the other parts of this apparatus of innervation? The method is essentially simple, and when closely examined we might, at first, wonder that it has not yet furnished us with more complete data. Experimental physiology had, by methodical analysis, determined the exact part which each of these factors play in the entire mechanism. This has been effected by a process of deduction, obtainable by observing the effects of functional suppression of one or the other part of the apparatus of innervation. The analysis of the disturbance of circulation brought about by the division of the medulla at its lower boundary, has instructed us as to the part played by the cardiac and vascular centres situated in this portion of the nervous system; and the same has been the case in respect to the division of the medulla at different levels, and the division of the great sympathetic and the pneumo-gastric, in numerous places. Observation and analysis of the phenomena manifested in the heart, and circulation under the influence of cardiovascular drugs and poisons, have aided in this line of research. This method must necessarily lead toward the desired result of knowing the elective action of a drug or poison on each portion of the apparatus of innervation of the heart. Professor Sée takes, as an example, muscarin. Introduced into the animal system, this poison brings about arrest of the heart in systole. As to the explanation of this fact, many hypotheses may be framed; it may be attributed to paralysis of the accelerator system, represented by filaments of the great sympathetic, but the section of this nerve does not affect in any way the results of the experiment; or it may be explained by supposed excitation of the inhibitory filaments of the trunk of the pneumo-gastric, but the section of this nerve does not in any way prevent the arrest of the heart from being produced under the influence of muscarin. The very fact that the heart is arrested in systole does away with the hypothesis of direct paralysis of the cardiac muscle by muscarin. Moreover, mechanical excitation of the heart thus arrested in systole, renews its contractions. The share of the ramifications of the nerves of the heart and the intracardiac ganglia remain to be considered. A pharmacologist of great merit, M. Schmiedeberg, has shown, with admirable demonstrative precision, that muscarin produces the arrest of the heart in systole by exciting the intracardiac inhibitory centres.

This is the method, in its simplest terms. If it has not yet yielded the fruits which might have been expected from it, there are probably two special reasons which may serve to explain this: the first, which will for a long time help to check the progress of this study, lies in the complexity of the composition of these alkaloids, which represent, according to modern ideas, the active principles of the medicines which we use; most, at least, of those which are drawn from the vegetable kingdom. If we reflect a little on the discoveries made with regard to this subject during the last few years, we shall recognize the inherent difficulty which it involves. Aconitine was once believed to be a well defined body, an individuality both chemically and physiologically; at the present moment we are in a stage of great perplexity and difficulty in respect to the number of aconitines, which differ from each other to a very considerable extent in the intensity of their poisonous effects. The same remarks apply to digitalin; and the chemists who are studying this question are apparently disposed to expect that from each of these alkaloids, which are now reckoned as well defined

and almost elemental principles, we may shortly extract as many distinct active principles as have been already found in opium.

Two distinct alkaloids have already been extracted from pilocarpine, namely, true pilocarpin and jaborine, possessing absolutely dissimilar pharmacodynamic properties; whilst the raw pilocarpin of commerce resembles muscarin in its action, pilocarpin isolated from jaborine shows a remarkable analogy in its action to nicotin; jaborine, on the contrary, exercises on the heart effects similar to those produced by atropine.

The second reason why this study of the elective action of cardiac medicines on the different parts of the system of innervation of the heart proceeds with so much slowness is, that the localization of the effects of the same agent varies with the doses and the duration of the experiment. Certain effects have been recognized by certain experimenters, and described when they were produced by very minute doses, and lasted but a few seconds, and these appear in tables of reference that profess to indicate the effects of the drug, without always indicating the exact condition, or the precise circumstances under which such effects were produced. Moreover, these primitive and specific effects of a drug on a certain part of the apparatus of the innervation of the heart, may be masked or interfered with by the energetic effects of the same agent on other systems. Thus a substance which excites the inhibitory filaments of the pneumogastric causes slackening of the heart's action; but this effect may be compensated by paralysis of the vaso-motor system, which tends to lower the intravascular pressure, with consecutive slackening of the heart.

The following table will indicate, at a glance, the principal facts already known in relation to the elective action of cardio-vascular drugs and poisons:

	Stimulation.	Paralysis.
Cardiac muscle.....	Digitalin.	The same in the second period of action.
	Iodine in small doses.	Emetin.
	Camphor.	Salts of copper, barium and potash.
	Caffeine.	Chloral in large doses. Scillaine.
Intra-cardiac muscular motor centres.		Saponine in its last period of action. Iodine in large doses.
Intra-cardiac inhibitory centres.	Muscarin.	Atropin. Fabarin. Spartin in large doses.
Intra-cardiac ramifications of the inhibitory filaments of the vagus nerve.	Nicotin. Pilocarpin. Calabar bean.	Pilocarpin, sec'd phase of action.
Trunk of the vagus nerve.	Aconitin. Napelin.	Spartin. Nepalin, second phase of action.
Accelerator filaments of the great sympathetic.	Apomorphin.	Spartin.
Medullary inhibitory centres.	Digitalin.	Chloral.
Vaso-motor centres...	Bromide of potassium.	Croton-chloral. Hydrocyanic acid.

—*Brit. Med. Jour.*, Feb. 17, 1883.

The Contagium of Gonorrhœa.—Dr. Elkund, of Stockholm, has sent me a manuscript in French, on the microscopic organisms seen in gonorrhœa. In order to arrive at some conclusion about this curious point in contagion, Dr. Elkund has made many microscopic examinations of gonorrhœal pus, and also of the most superficial layer of the mucous membrane of the navicular fossa, which latter he removed by means of a small knife, used for microscopic dissections, which he introduced into the canal of the urethra to the length of about two or three centimetres. He studied this latter preparation in its natural state, being convinced, from experience, that this was the best way to avoid false conclusions. Sometimes he added a little acetic acid, or solution of aniline, as, for example, fuchsine, and also carmine, etc.

In the first place, he always found the gonococcus described exactly by Neissen, the diameter of which varies from less than 0.1 to 0.5 mm., and larger. These are as brilliant as pearls. The whole of the round cells called pus, are perfectly full of these, and they are also found in innumerable quantities in the inter-cellular liquid. Sometimes they move rapidly, sometimes they are united like a figure of 8, which, according to Neissen, proves that their pullulation takes place by scission. When tinged with aniline violet it is seen that the gonococcus is a flat plain disc, not a spherical ball; but Dr. Elkund cannot agree with those who maintain that these microbions represent the only specific part of gonorrhœa, since he has found similar and probably identical ones in acute and chronic disease of the intestines and lungs, and in ulcerative stomatitis. Generally, he thinks it the common office of these organisms to produce acute inflammation with desquamation of the epithelial cells, and the formation of pus cells which are filled by them. Indeed, these organisms represent troups of miners in pathology.

Long ago the same writer found that in cases of gonorrhœal cystitis the cells of pus from the bladder were, as a general rule, furnished with appendices, either filiform or gemmiform. The pus and the exudation of the inflamed mucous membrane of the urethra contain, without exception, a beautiful network of mycelial filaments. The principal filaments of the organism in question, which Dr. Elkund calls *ediophyton dictyades*, have a transverse diameter of precisely 1 mm., and are perfectly clear and hyaline. These filaments anastomose with each other at all angles. The mycelial tubes here and there have complete networks of swellings, the limiting lines of which are either regular or very sinuous. The parasite in question, like all similar, is gifted with the power of propagation by the simultaneous lengthening of an immense number of mycelial filaments or fragments of secondary ramifications of those which proceed along the superficial layers of the mucous membrane, and which enter into the glands of Littré, Cowper, etc. It is truly exceptional for this little organism to burrow, like the one seen in diphtheria, so as to produce a general infection, for the firm fibrous tunic surrounding the urethra forms a solid rampart to prevent the advance of the mushroom, and the organic resistance of the patient is generally greatest at the epoch when a man contracts gonorrhœa.

As a general rule, the ramifications of the mycelium run most along the surface of the mucous membrane of the urethra, the fundus of the bladder, the ejaculatory ducts, the seminal vessels, and deferent canals, etc. In cases of chronic catarrh of the lungs after gonorrhœa, Dr. Elkund says he has noticed the gonococcus of Neissen, and the microbion just described in the sputa. He says that it is well known that in the urine of scarlatina patients there are found filaments of mycelium long and hyaline, and alleges that in cases of female patients such urine may set up gonorrhœa in the vagina; and he has constantly found the same mushroom in the gonorrhœal discharges of women.

Dr. Elkund says that in all his microscopic examinations of the pus, and superficial layers of soft sores he has found the gonococcus of Neissen and the *ediophyton dictyades*. He, therefore, believes the virus of soft chancre and that of gonorrhœa are identical. It is only, he puts it, the difference of the affected localities which cause the difference in symptoms, a solution of continuity being necessary to produce a soft sore. Surely, this is not worth alleging without experiments, and, as a rule, experiment flatly contradicts the assertion of Dr. Elkund.

The author also says that the microbions of balano posthite consist in vibrios of putrefaction. Such are often found in the Douglas *cul de sac* of women, and may give rise to grave peritonitis in some cases.

Dr. Elkund made some microscopic experiments on various therapeutic agents commonly used in gonorrhœa. Saturated solution of borax did not seem to influence the organisms. A solution of per-

chloride of mercury had but little effect on them (1 in 10); but the tincture of eucalyptus globulus had a good deal of power in causing the movements of the gonococcus to cease.

He has succeeded in curing patients, after disappearance of the acute stage of gonorrhœa, by means of cold sitz baths and injections of solutions of phenic acid, or chloral hydrate; 1 to 600 of the first, and 1 in 150 of the second; giving at the same time copaiba and cubebs. He found that in convalescence from gonorrhœa the gonococcus first disappeared from the urine. The ediophyton are very difficult to be got rid of.

The conclusions of Dr. Elkund then are—1. Diagnosis. The elements of diagnosis in gonorrhœa are comprised in the discovery by microscopic examinations of the presence of the gonococcus of Neissen and of the *ediophyton dictyades* in the pus which is examined. As to prophylaxis, extreme cleanliness is enjoined to prevent fragments of the latter entering the passages.

Treatment.—Introduce as soon as possible into the urethral canal of the male as deep as from 3 to 6 centimetres a bougie covered with carbolized oil, and made of iodoform and 10 drops of essence of eucalyptus globulus with cocoa butter 2.5 grammes, which is then allowed to liquefy in the canal. Excoriations he recommends to be touched with a hair brush dipped in a solution of iodoform in essence of eucalyptus (1 in 10).

The cure will follow in proportion as the microscopic organisms can be killed by this treatment. The remedy recommended by Dr. Watson Cheyne, *i. e.*, of bougies as above mentioned is an excellent remedy, according to Dr. Elkund.

I have no means of saying how far Dr. Elkund is right in his assertions as to the presence of peculiar microscopic appearances in gonorrhœa, but there seems a possibility that it is so. I do not agree with him, however, when he talks of the identity of the virus of gonorrhœa with that of soft chancre, for I have not been able to produce the latter on patients by inoculating them with gonorrhœal pus. Syphilis eventually will, in all probability, be found also to have some special germs.—C. R. Drysdale, M. D., M. R. C. P., Lond., in the *Medical Press*, November 8, 1882.

On the Relation of Partial Retention of Urine to its Decomposition Within the Bladder.—The opinion is, I believe, current, it is certainly general in our books and elsewhere, that inability to empty the bladder completely is a common cause of chronic inflammation of the viscus, because a portion of stagnant urine is retained until it is decomposed, and so becomes an irritant. In this way, by confining some of the urine until it becomes decomposed, it is stated that all forms of obstruction to its exit produce chronic cystitis. Now, is not this opinion that residual urine thus remains to decompose based on a misconception of the actual facts, or at all events of the cause, in such a case? Is it not assumed that the urine which remains behind is a fixed quantity, and therefore stagnant? Is it not overlooked that, although the bladder may be never emptied, yet that, inasmuch as a large portion of the urine it contains is frequently leaving it to be replaced by another portion which is continually entering it, the same portion of urine does not necessarily remain long enough in the bladder to become, of itself, the source of the mischief that ensues? Of course urine may remain long enough in the bladder to decompose, for no one needs to be reminded of the fetid urine reeking of ammonia in chronic cystitis; and it admits of demonstration that urine which enters the bladder in a healthy state is very rapidly changed by the disordered secretion of that organ. But this need not depend simply on retention, either total or partial. Micturition may be frequent, and the bladder may be frequently quite emptied, and yet the urine that flows may be putrid; or urine may be retained for a very long period, and yet when it escapes there may be no evidence of decomposition. In recumbent position, the bladder is never able to expel the whole of its contents, and yet this state of things may continue for weeks without the residual urine showing any sign of decomposition; and in other cases, where it may even become necessary to draw off the urine in this enforced position of the patient, the bladder, in all probability, never becomes completely emptied, and yet, at least for a long while, the urine passes without change. Therefore, even if all reasoning on the matter be excluded, it cannot, in the face of these facts, be accepted that as a rule residual urine is to be regarded as the source of the mischief that is so often associated with it. No doubt the longer any given quantity of urine is retained in the bladder, when the causes of its decomposition are rife there, the farther will its decomposition proceed. But the duration of the retention of any given portion is by no means represented by the amount of residual urine after each act of micturition. The quantity of urine which enters and escapes from the bladder daily must rather be considered. Just as the water drawn off from a cistern gives no evidence of being stale or changed, although the reservoir is never emptied, because the whole of its contents are nevertheless rapidly renewed.

If healthy urine is passed into a bottle capable of holding, say, two pints, and the bottle as it becomes filled is from time to time only partially emptied, so that always about half a pint be left behind, the urine in the bottle, even after months, will still retain an acid reaction. It does not become ammoniacal or acquire the characters of the urine in chronic inflammation of the bladder. And in this experiment the circumstances, so far as ordinary decomposition of stale urine is concerned, are, on the whole, far more favorable to change; for although the temperature of the bottle may not be so high as that of the bladder, yet air is frequently and freely admitted, and of course it is always abundantly present. If the changes by which urine becomes ammoniacal are due only to long-continued partial retention, how is the negative result of this experiment to be explained?

Yet, although I venture to think that the prevailing opinion in this respect is not well founded, I am indeed very far from saying, or even intending to suggest, that there is no evil in partial retention. On the contrary, it is clear enough that the presence of residual urine implies some delay in the escape of a portion of it, and therefore in a corresponding degree favors the advance of decomposition. But this, I need not remark, is a very different view from that which regards partial retention as a common starting-point of cystitis and the further evils which hence ensue. But then the fact remains that these two evils—residual urine, the result of partial retention, and chronic cystitis—are very commonly associated. Can this be explained? The direct and immediate cause of the decomposition of urine in the bladder, which enters it in a healthy state, is the presence and action of a morbid secretion of the mucous membrane. Practically the changes of urine in the bladder are dependent on the action of unhealthy mucus, and the degree of decomposition, although of course affected by the time the urine remains there, is yet chiefly determined by the character of the diseased secretion which mingles with it. Even under the conditions of health it is the mucus present in the urine which mainly determines the decomposition of urea, as the result of the simple experiment of filtering fresh urine shows, and when mucus is morbid it is far more destructive. Now, this disordered secretion must be the product of an unhealthy membrane; and while there is but little difficulty in understanding how, when the texture of its lining membrane is altered, the bladder is hampered in its action, and its full and complete contraction impeded, there is hardly less difficulty in believing that a full and complete contraction of it from time to time is an essential condition of a healthy mucous

membrane, and of a due secretion and free escape of healthy mucus. Therefore, the conditions under which the bladder is only partially emptied are oftentimes the very conditions under which unhealthy, and therefore highly mischievous, mucus is brought in contact with the urine there.—Wm. S. Savory, F. R. S., in *The Lancet*, Oct. 14, 1882.

Medicine as Practiced by Animals.—M. G. Delaunay, in a recent communication to the Biological Society, observed that medicine, as practiced by animals, is thoroughly empirical, but that the same may be said of that practiced by inferior human races, or, in other words, by the majority of the human species.

Animals instinctively choose such food as is best suited to them. M. Delaunay maintains that the human race also shows this instinct, and blames medical men for not paying sufficient respect to the likes and dislikes of the patients, which he believes to be a guide that may be depended on. Women are more often hungry than men, and they do not like the same kinds of food; nevertheless, in asylums for aged poor, men and women are put on precisely the same regimen. Infants scarcely weaned are given a diet suitable to adults, meat and wine which they dislike and which disagree with them. M. Delaunay investigated this question in the different asylums of Paris, and ascertained that children do not like meat before they are about five years of age. People who like salt, vinegar, etc., ought to be allowed to satisfy their tastes. Lorain always taught that with regard to food, people's likings are the best guide.

A large number of animals wash themselves and bathe, as elephants, stags, birds and ants. M. Delaunay lays down as a general rule, that there is not any species of animal which voluntarily runs the risk of inhaling emanations arising from their own excrement. Some animals defæcate far from their habitations; others bury their excrement; others carry to a distance the excrement of their young. In this respect they show more foresight than man, who retains for years excrement in stationary cesspools, thus originating epidemics.

If we turn our attention to the question of reproduction, we shall see that all mammals suckle their young, keep them clean, wean them at the proper time and educate them; but these maternal instincts are frequently rudimentary in women of civilized nations. In fact, man may take a lesson in hygiene from the lower animals.

Animals get rid of their parasites by using dust, mud, clay, etc. Those suffering from fever restrict their diet, keep quiet, seek darkness and airy places, drink water and sometimes even plunge into it. When a dog has lost its appetite it eats that species of grass known as dog's grass (*chiendent*), which acts as an emetic and purgative. Cats also eat grass. Sheep and cows, when ill, seek out certain herbs. When dogs are constipated they eat fatty substances, such as oil and butter, with avidity, until they are purged. The same thing is observed in horses. An animal suffering from chronic rheumatism always keeps as far as possible in the sun. The warrior ants have regularly organized ambulances. Latreille cut the antennæ of an ant, and other ants came and covered the wounded part with a transparent fluid secreted from their mouths. If a chimpanzee be wounded, it stops the bleeding by placing its hand on the wound, or dressing it with leaves and grass. When an animal has a wounded leg or arm hanging on, it completes the amputation by means of its teeth. A dog on being stung in the muzzle by a viper, was observed to plunge its head repeatedly for several days into running water. This animal eventually recovered. A sporting dog was run over by a carriage. During three weeks in winter it remained lying in a brook, where its food was taken to it; the animal recovered A terrier dog hurt its right eye; it remained lying under a counter, avoiding light and heat, although habitually he kept close to the fire. It adopted a general treatment, rest and abstinence from food. The local treatment consisted in licking the upper surface of the paw, to which he applied the wounded eye, again licking the paw when it became dry.

Cats also, when hurt, treat themselves by this simple method of continuous irrigation. M. Delaunay cites the case of a cat which remained for some time lying on the bank of a river; also that of another cat which had the singular fortitude to remain for forty-eight hours under a jet of cold water.

Animals suffering from traumatic fever treat themselves by the continued application of cold, which M. Delaunay considers to be more certain than any of the other methods.

In view of these interesting facts, we are, he thinks, forced to admit that hygiene and therapeutics, as practiced by animals, may, in the interests of psychology, be studied with advantage. He could go even further, and say that veterinary medicine, and perhaps human medicine, could gather from them some useful indications, precisely because they are prompted by instinct, which are efficacious in the preservation or the restoration of health.—*British Medical Journal*, February 10, 1883.

Æsthetics and Drug-Taking.—It is a matter of some practical interest to the physician that he take account of the results of the impact of the æsthetic wave upon the medical profession. It has long been observed that, with developing civilization, the people have become more intellectual, and the doctor has had in consequence to become more wide-awake. The education of the æsthetic sense in this country has been more recent, but it too is now a thrity and vigorous cultus. Our modern society, in fact, has become much more sensitive to what is disagreeable and much more responsive to what is agreeable than was formerly the case. The beautiful is ardently admired and the ugly as warmly detested. Æsthetics even supplants morals with many, especially of the fairer sex, vulgarity being often thought worse than wickedness, and good manners quite an atonement for bad morals.

Now, if any one doubts the bearing of all this upon medicine, let him prescribe nauseous draughts and ill-smelling mixtures among his upper-class patients for a while. He will soon find that it does not answer. The young physician of to-day has an additional lesson to learn. He must not only give the right thing therapeutically, but must give it agreeably.

The pharmacist has become well aware of this new demand of the public—the tradesman being always most plastic to developmental readjustments or fashion's changes. Note the history of cod-liver oil. No scientific problem has received more attention or diverted more cerebral force than has that of making oleum morrhuæ palatable. Even though it has proved a kind of North Pole of pharmaceutical ambition, the struggle is not yet given up. The demand for agreeable medicines shows itself also in the remarkable growth of the pill trade. The bolus is now hardly known, and we give in small and slippery pellets what our grandfathers conquered asphyxia in attempting to swallow. The pill, to be sure, is tasteless, and its æsthetic value is chiefly negative, yet it accomplishes the object of attacking the disease without afflicting the senses. There are also popular practitioners in our city who are not content with this merely negative position of the pill, but require their druggist to put upon it a seductive coating of gold or silver foil. The mental effect of taking these expensive-looking globules is not to be ignored.

The manufacture of elixirs, syrups, and various aromatic compounds has also vastly increased under this demand for the non-offensive in medicine. To make something which "children will cry for" is the honest ambition of many a druggist who appreciates the signs of the times. Since medicine-taking

with Americans often becomes as much a pastime as a serious business, the syrup and elixir trade flourishes, greatly to the delectation of childhood and the content of the adult.

The moral to be drawn from the state of things thus portrayed is most apparent and important. The practitioner must regard not only the disease but the palate of his patient. Not that we would always recommend the prescription of pleasant-favored mixtures. There are some persons who measure the value of their medicine by the strangulating effects which accompany its taking. But the wise physician will study the whole case, and in prescribing for the disease not forget the individual.—*Medical Record.*

Therapeutic Novelties.—The New York Medical Journal of recent date contains a noteworthy article commenting on the decided reaction that has been going on during the last ten years from what may be called the dark ages of therapeutics—that period of skepticism, or "therapeutic nihilism," as it has been termed, which succeeded the long and dreary reign of the lancet, the purge, and the sialagogue, in which having laid aside the commanding air of their predecessors, the profession stared at disease in a dazed sort of way, and virtually cried non possumus at every turn. Detached data, the Journal observes, had been lying barren long enough, it was time to "put two and two together." Hence the renaissance of medication witnessed during the last few years. Beginning with the topical application of remedies, in which sphere an astonishing range was rapidly disclosed, it soon advanced to systemic drugging. It was straightway ascertained that certain potent drugs could be pushed to more decided action upon the system than had before been thought warrantable; and, on the other hand, it was proved that several agents were capable of acting quite as efficiently in doses that had up to that time been denied any effect whatever, and, of course, without the inconveniences, not to say dangers, that had formerly attended their use.

The next step in the march of therapeutics was the investigation and adoption of many new drugs that proved to be endowed with powers that had never been dreamed of—powers, too, that no agents previously in use possessed. In chloral a true hypnotic was found; in jaborandi we were furnished with a diaphoretic that, so to speak, snapped its fingers at such adjuvant measures as warm drinks and the like; in apomorphine we beheld an emetic that needed not the voluntary swallowing of a bulky dose. New properties were discovered to reside in old drugs, to be sure, and their range of usefulness was surprisingly extended; but it cannot be questioned, nor is it to be wondered at, that the fact that unheard-of effects were found to follow the use of substances which before had been either unknown or untried, made a profound impression upon the minds of therapeutists.

The natural result of all this has been to stimulate a search after still other new therapeutic actions, and consequently after novel additions to the materia medica. It may well be asked if this rage for novelties is not in danger of being carried too far. It has given rise to a special literature; indeed, there are publications wholly devoted to new remedies, and their pages fairly bristle with an endless array of substances drawn from all three of the great natural kingdoms. We do not deprecate this bare fact, but we do feel called upon to suggest that the ardor of our search in this direction should not be allowed to lead us into giving credence to every apparent instance of a definite therapeutic effect from substances heretofore untried or considered as destitute of any such action: We insist only upon systematic, cool, and deliberate observation, backed up, if need be, by some remnant of the incredulity of a past generation. Certainly, as a matter of practice, it is not wise to be led hastily into novel methods of medication on the strength of the questionable data that largely enter into the constitution of the literature of new remedial agents.—*The Druggist.*

Corrosive Sublimate.—This well-known and powerful drug, whose virtues as an antiseptic were first made known to the world by R. Koch, is now rapidly coming into use. Tarnier employs it freely in his maternity hospital. Every attendant on entering the labor ward must wash the hands and arms in a solution of corrosive sublimate (one in one thousand). The patient's genitals are bathed in a solution of the strength of one in two thousand; this is also the strength required for vaginal injectures. He appears to be well pleased with the results. Billroth has also been employing it as a surgical dressing in the case of suspected anthrax. A patient admitted into hospital had been in attendance on a sick ox, from the rectum of which he had removed masses of coagulated blood, passing the hand deeply into the cavity. Afterward pustules made their appearance on the dorsum of the hand. It was this condition of the hand, with the attendant history, that led Billroth to a trial of corrosive sublimate, apparently of the strength of one in five thousand. No fever had set in after several days' employment of the antiseptic.—*Medical Press.*

Hot Water in Synovitis.—Dr. J. D. Thomas, Pittsburg, Pa. (Pittsburg Medical Journal, December, 1882), reports good results from the following procedure in synovitis. He procures two large flat sponges, sufficiently large to envelop the joint; these are washed clean, in order to remove any sand or calcareous matter contained in them, then squeezed dry and applied to the swollen joint, and over this a roller bandage is applied as firm as was possible to apply it, the bandage covering the sponges perfectly, and then hot water applied until the sponges are saturated; this hot water application should be practised every two hours. He cites several cases as evidence of the value of this treatment.—*Gaillard's Medical Journal.*

New Remedies.

The New Treatment of Granular Lids by Jequirity.—The use of this drug in the treatment of granular lids and pannus is new to the medical world. The botanical name of the plant is Abrus precatorius. It is a native of India, but is now found in South America, the Pacific Islands, the West Indies, and tropical Africa. It is supposed to have been introduced into these latter countries. It is known officinally in the Pharmacopœia of India under the name of Abri radix, the root being used as a substitute for licorice. The portion used for the present purpose is not, however, the root but the seeds, small red peas, which have long been used in tropical countries as beads, and in India as weights under the name of rati, and as such have been estimated at two and three-sixteenths grains each. Wecker has recently published two articles in the Klinische Monatsblätter urging upon the profession the use of this agent for the treatment of granular lids. He states that it has long been in vogue in Brazil as a popular remedy for this disease, but that it was unused by, and unknown to, the medical profession there. Dr. H. B. Chandler, my colleague, says that it is also employed by the negroes in the West Indies for what they call "blurred sight" in very much the same manner as we have used it here.

The drug is prepared for application by putting the freshly-pulverized seeds into cold water, and allowing them to macerate for twenty-four hours, then filtering, and the preparation is ready for use. Our first preparation was made according to the first prescription of Wecker, which was three grammes of

the seeds to one thousand grammes of water. This preparation was used in three cases, but entirely failed to produce any result. The next preparation used was according to Wecker's second prescription, ten grammes to five hundred grammes of water. This was the form in which the drug was used in nine of the following cases. In four of the cases the preparation was made by digesting, ten grammes of the drug for five hours exposed to the air with just enough water to cover the powder, and then placing it in five hundred grammes of water, allowing it to remain for nineteen hours, and filtering. The preparation was freshly made for each case. The method of application was to paint the outside of the lids thoroughly with the above preparation, using a small camel's hair brush for that purpose, and then everting the lower lid, and carrying the brush rapidly across it two or three times. This was done three times a day. A separate brush was used for every patient. The patient was kept in a dark room during treatment, and as long afterward as seemed necessary. After the applications were discontinued no further treatment of any kind whatever was given. The first application was always at night, and the accompanying notes were taken at intervals of twenty-four hours from first application. The vision before and after treatment was tested with extreme care, and is given in decimal fractions in the notes, 1. being normal vision.

Case 1.—Woman, 39 years old, domestic. Lost left eye 17 years ago. Had been troubled with right eye for 15 years; symptoms, redness, pain, photophobia, and swelling of lid, with progressive diminution of sight since commencement of trouble. Has been under treatment for granular lids during this time at different hospitals in this city, New York, Lowell, at Manchester, Eng., and at this institution, and has been treated as an in-patient in these different institutions at various times, amounting in all to about two years of this time, and almost a constant attendant at other times.

Present condition: Conjunctivæ of lids very vascular, and covered with fine, bright red granulations, presenting the appearance of granulations that had been treated for some time with the usual applications. The upper two-thirds of the cornea covered with a thick opaque pannus; the upper half of which was of a thick, fleshy character. Vision — .01.

April 21, 1883. First application.

April 22. No symptoms.

April 23. Œdema of lids, much discharge, and photophobia.

April 24. Croupous membrane; œdema of lids, which have a purplish hue; photophobia not excessive; lower third of cornea now covered with a grayish opacity; chemosis; chills last night and to-day.

April 25. Heated turns, chills, dizziness; no appetite, constant pain through head and forehead; lids quite purple; profuse thick discharge. Discontinued jequirity. Total, ten applications.

April 26. In twenty-four hours since treatment discontinued complete subsidence of all constitutional symptoms, with œdema, chemosis, discharge, and photophobia very much diminished.

April 27. Some œdema; disappearance of other symptoms; lower portion of cornea again transparent.

May 14. Conjunctivæ of lids smooth; no granulations; pannus cleared up so that iris is perfectly visible; one vessel runs up on to the cornea; condition of cornea improving from day to day; vision — .1; irregular corneal astigmatism.

Case 2.—Girl, 13 years old. Had had "sore eyes" since she was four years old. Belongs to a family every one of whom has granular lids.

Condition at commencement of treatment: Large, rough granulations covering entire conjunctiva of the upper lid of each eye. The cornea of each eye was covered with a thick, gray pannus on its upper half, and vascular. Vision right eye — .016. Vision left eye — .05

April 21. First application; both eyes.

April 22. Light causes considerable pain; no other symptom.

April 23. Slight amount of discharge; no membrane; other symptoms not intensified.

April 24. Profuse discharge and great photophobia; no constitutional symptoms. Discontinued jequirity. Total, nine applications.

April 25. Discharge has ceased; slight photophobia remains.

April 28. Light causes no pain.

May 14. A few sharply projecting granulations along the retro-tarsal fold on the conjunctiva of the upper lid; these appear to be shrinking in size daily; conjunctivæ appear quite white; pannus entirely disappeared; irregular corneal astigmatism; vision right eye — .2; vision left eye — .3.

Case 3.—Girl, 14 years old, domestic. Eleven months ago both eyes became red; some swelling of lids; pain on exposure to light, etc. Has had treatment as an out-patient at one of the hospitals, and as a house-patient at this institution. Not only had received no relief, but both eyes had become progressively worse.

Condition at commencement of treatment: Conjunctivæ of both upper lids hyperæmic, with fine granulations over entire surface; conjunctivæ of both lower lids covered with coarse, rough granulations. The entire cornea of each eye covered with a thin, grayish infiltration, with the exception of a clear spot one millimetre broad and three millimetres long on the inner side of the right cornea. There were no large vessels on the cornea. Vision right eye — .1; vision left eye only perception of light.

April 21. First application; both eyes.

April 22. No photophobia; free watery discharge with some pus; shreds of croupous membrane hanging from conjunctiva.

April 23. Profuse discharge; no croupous membrane; photophobia not present.

April 24. Profuse discharge; no membrane, no œdema, no chills.

April 25. Dizziness; no other change of symptoms. Discontinued jequirity. Total, twelve applications.

April 26. Discharge almost entirely ceased.

April 28. Slight discharge, and patient says she sees better.

May 5. Corneæ clearing up somewhat, but very slowly.

May 10. Increase of discharge, and some pain in both eyes last few days. To-day the eruption of rubeola appeared on face and shoulders.

May 22. Vision in each eye — .1.

Case 4.—Woman, 21 years, rubber worker. Received burn from pistol on left eye six years ago. More or less swelling of the upper lid ever since. Eighteen months ago eye became red, sensitive to light, followed by loss of acuteness of vision; has been under treatment as an out-patient for a year and made no gain, in fact vision has diminished.

Condition at commencement of treatment: Marked fullness of the upper lid. Conjunctiva of upper lid bright red and covered with fine granulations. Coarser granulations along the retro-tarsal fold. Conjunctiva of lower lid covered with coarse bright-red granulations. Cornea, entire outer half covered with a vascular semi-transparent cloudiness, over which run several large vessels. Vision left eye — .1.

April 21. First application; left eye.

April 22. Photophobia; free watery discharge, and some shreds of croupous membrane.

April 23. Considerable œdema of lids; croupous membrane; great photophobia; chills.

April 24. Tensely swollen lids, purple, and separated with difficulty; croupous membrane and chemosis, with thick discharge; chills; headache on same side; loss of appetite; complains also of dizziness upon attempting to walk.

April 25. Discontinued treatment. Total, ten applications.

April 26. Subsidence of all acute symptoms, both local and constitutional.

April 28. Very slight intolerance of light; slight discharge; increased cloudiness of cornea.

May 16. No granulations on lower lid; line of coarse granulations along the retro-tarsal fold; increased cloudiness of cornea as compared with commencement of treatment. Vision left eye = .05.

Case 5.—Man, 34 years old, mason. Burned both eyes with mortar in January, 1882. Obliged to give up work on account of present trouble in January, 1883. Has had constant treatment since as an out-patient at a hospital, without benefit. Has been a house patient at this institution for a month without abatement of symptoms. Has pain, photophobia, and watery discharge, with some pus.

Condition at commencement of treatment: The upper lids of both eyes were covered with fine, bright-red granulations and extreme hyperæmia of the conjunctiva. The upper third of the cornea of each eye was covered with a red vascular pannus. Vision of the left eye = .3; vision of the right eye = .1.

April 16. First application; both eyes.

April 17. Complains that he cannot open them on account of pain from least light.

April 18. Some pain; profuse discharge of watery secretion.

April 19. Feels weak and excitable; has chills, with fever turns; headache; œdema of lids; pus-like discharge; croupous membrane on conjunctivæ of both lower lids. Ordered one-eighth grain morph. sulph. at night. Omitted jequirity. Total, nine applications.

April 20. Same pain on left side; discharge subsiding.

April 22. Photophobia disappeared; discharge greatly abated.

April 23. Right eye feels perfectly well; slight photophobia and discharge from left eye.

The vision in this case was unfortunately not taken, but the patient stated that his eyes were much more comfortable, and that he could see considerably better.

Case 6.—Man, 38 years, shoemaker. Six months ago was struck in the face by a snow-ball containing ice, injuring both eyes. No pain or swelling of lids before injury. Has had lachrymal abscess. Since admission to this institution he has had great pain, swelling of lids, photophobia, with profuse watery discharge, mixed with pus. Has had ulcer of cornea on right eye several times since admission, which rapidly disappeared under atropine. Has had usual treatment for granulations since entrance, with an abatement of swelling of lids and photophobia, but two weeks ago got much worse, with great pain and large amount of discharge, containing much pus. Pain so great patient desired to have right eye enucleated.

Condition at commencement of treatment: Conjunctiva of lids bright-red and covered with coarse granulations. Upper lid much swollen; much photophobia. Thick vascular pannus over upper half of cornea, with profuse discharge of a watery character. Vision of right eye = .016.

April 16. First application; right eye.

April 17. Slight pus-like increase of discharge.

April 18. Complains of pain and photophobia; discharge increasing; croupous membrane on conjunctiva of lower lid; œdema of lids. Ordered one-eighth grain morph. sulph. at bed-time.

April 19. Slept well last night; has pain in head on same side extending back over forehead from eye; increase of discharge, and some chemosis; chills, with fever turns. Ordered one-quarter grain morph. sulph. at night. Omitted jequirity. Total, nine applications.

April 20. Some pain; thin, pus-like discharge from eye.

April 22. Pain continues; continued discharge.

April 23. Œdema remains; considerable swelling; discharge continues; ulcer of cornea one millimetre in diameter discovered to-day on cornea.

April 27. Ulcer of cornea treated with atropine without improvement.

May 16. Ulcer of cornea still persists without becoming much worse; granulations much reduced in size but still present. Vision right eye = .02.

Case 7.—Man, 34 years old, baker. Right eye began discharging water in January, 1882, and three weeks later left eye became troublesome also. Was obliged to give up his occupation, and was treated at institutions in New York and Philadelphia for granular lids. Had upon entrance much pain running up over forehead, and considerable photophobia.

Condition at commencement of treatment: Conjunctiva of upper lids covered with fine bright-red granulations, and larger granulations along the retro-tarsal fold; cornea, upper half opaque with four large vessels running in to the centre of cornea. Vision left eye = 1.

April 16. First application; left eye.

April 17. Photophobia; slight watery discharge.

April 18. Œdema of lids; pain in eye; increase of pus-like discharge; croupous membrane on lower lid. One-eighth grain morph. prescribed at night.

April 19. Complains did not sleep last night; has nausea; extreme pain in right side of head; great photophobia; no croupous membrane, but shreds of membrane floating out from conjunctiva of lids on a profuse watery discharge. Ordered one-fourth grain morph. at night, and omitted jequirity. Total, nine applications.

April 20. Much pain last night, but to-day it has all disappeared; considerable discharge, with some shreds of membrane.

April 22. Photophobia ceased; discharge nearly so.

April 23. Eye feels perfectly well; no discharge.

May 21. Conjunctiva of lids smooth; no granulations; pannus has disappeared. Vision left eye = .6.

Case 8.—Man, 26 years old, laborer. Eyes have been very troublesome for four years. Entered infirmary December 13, 1882. Granulations and slight pannus in both eyes, and a large central vascular ulcer of cornea of left eye; ulcer perforated December 19; discharged February 14 with large central opacity of left eye; granulations and pannus improved; re-entered April 23.

Condition at commencement of treatment: Left eye: Conjunctiva of upper lid, thick, coarse granulations; lower lid, finer granulations; cornea entirely covered with thick, grayish-white, vascular infiltration, completely covering outline of iris; many large vessels running over conjunctiva of globe. Vision simply perception of light. Right eye: Condition of lids similar to left eye, and cornea entirely covered with a thin semi-transparent grayish infiltration. Vision of right eye = .01.

April 27. First application.

April 28. No photophobia; croupous membrane; profuse clotted discharge of pus.

April 29. Condition remains much the same as yesterday; no appetite, but slept well.

April 30. Very profuse discharge of thick clotted pus; discontinued jequirity in right eye. Total, right eye, nine applications.

May 1. Discontinued treatment in left eye. Total, left eye, twelve applications.

May 3. Pus discharge entirely ceased; some watery discharge.

May 5. Discharge entirely ceased; patient says he already sees better with right eye, and that he sees more light with left eye.

May 12. Right eye: Cornea does not seem to clear up as expected. Left eye: Cornea, even the central portion, has cleared up greatly; the iris and margin of pupil distinctly seen through cornea.

May 19. Grayish point has appeared in lower third of right cornea, with pain and symptoms of corneal ulcer; atropine was used.

May 21. Symptoms of the 19th seem becoming

more pronounced; atropine was discontinued, and a collyrium of pilocarpine used; the symptoms of ulcer of cornea disappeared under the pilocarpine, and the cornea cleared up.

May 31. Conjunctivæ of lids smooth. Vision of right eye = .08; counts fingers with left eye at a distance of two metres.

Case 9.—Woman, 22 years old, domestic. Duration of disease, two years; and has been under treatment almost the entire time as an out-patient of this institution.

Condition at commencement of treatment: Fine granulations over entire conjunctiva of both upper lids; slight grayish infiltration of upper third of each cornea. Vision right eye = .1; vision left eye = .008.

April 27. First application.

April 28. Great photophobia; profuse discharge; pain spreading up over forehead; no croupous membrane.

April 29. Complains of constant pain; great intolerance of light; œdema of lids so great as to prevent their being separated in the least; profuse discharge of clotted pus; loss of appetite; chills and feverish turns; reduced strength of jequirity, one-half.

April 30. Excessive virulence of symptoms greatly abated; still great intolerance of light, and profuse watery discharge containing pus; omitted jequirity. Total, nine applications; three one-half strength.

May 1. No pain, only slight discharge.

May 14. Conjunctivæ of lids smooth; no granulations; pannus entirely disappeared; some irregular astigmatism of cornea. Vision right eye = .4; vision left eye = .1.

Case 10.—Girl, 12 years old, school girl. Disease of four years' duration; has been treated as an out-patient at different times at three hospitals in this city.

Condition at commencement of treatment: Has constant pain and photophobia; fine bright-red granulations over the conjunctiva of both upper lids; thick pannus over upper half of each cornea, dense enough to completely hide the outline of the iris. Vision of left eye = .1; vision of right eye = .3.

May 5. First application.

May 6. Photophobia; discharge.

May 7. More intolerance of light; discharge increasing, containing pus; slight œdema.

May 8. Continuance of symptoms of yesterday, but no constitutional symptoms; discontinued jequirity. Total, nine applications.

May 16. Conjunctivæ of lids smooth, and pannus much thinner, and becoming clearer daily. Vision of right eye = .4; vision of left eye = .3.

Case 11.—Woman, 60 years old, housewife. First trouble with eyes three years ago; was treated as an out-patient at Carney Hospital for three months, and eyes improved and remained tolerably comfortable until a month ago.

Condition at commencement of treatment: Thick, coarse granulations over conjunctivæ of both upper lids; grayish infiltration over upper half of cornea of left eye; right cornea has a grayish infiltration over upper half, on which are several small vascular ulcers. Vision both eyes = .08.

May 5. First application.

May 6. Photophobia; watery discharge; no pain.

May 7. Shreds of croupous membrane; discharge contains some pus; some pain and marked intolerance of light.

May 8. Some œdema; more pus in discharge; has chills and feverish turns; discontinued jequirity. Total, eight applications.

May 9. Rapid subsidence of all the symptoms.

May 16. Conjunctivæ of lids perfectly smooth; pannus fast disappearing. Vision of both eyes = 4 nearly.

Case 12.—Same patient as Case 6.

Condition of left eye at commencement of treatment: Same fullness of upper lid as in other eye. Fine red granulations over conjunctivæ of both lids. Light grayish infiltration over upper third of cornea. Vision = .1.

May 9. First application.

May 10. Great photophobia and profuse discharge.

May 11. Constant pain; œdema of lids excessive; profuse discharge of thick pus; chills; feverish turns; dizziness; loss of appetite.

May 12. Œdema so great lids cannot be separated, and required one-half grain morph. sulph. last night to sleep; jequirity stopped. Total, eight applications.

May 13. Much less œdema and pain, and constitutional symptoms entirely disappeared.

May 15. Little or no discharge; œdema subsided, but eye does not clear up.

May 18. Reappearance of intolerance of light somewhat, and upon examination found small ulcer of cornea.

May 22. Ulcer of cornea remains without increasing in size; granulations still to be seen on upper lid.

Case 13.—Same patient as Case 7.

Condition of right eye at commencement of treatment: Slight infiltration at upper border of cornea, and conjunctivæ of lids covered with fine bright-red granulations. Much discharge and some pain, and patient requested treatment in the second eye. Vision right eye = .3.

May 9. First application of wash.

May 10. Considerable photophobia; considerable puriform discharge.

May 11. Œdema of lids; constant pain in eye; profuse discharge of clotted pus; thick croupous membrane; was given one-fourth grain morph. sulph. at night.

May 12. Nausea; extreme pain; great photophobia; very profuse purulent discharge; omitted jequirity. Total, eight applications.

May 15. Minute ulcer cornea; all acute symptoms have disappeared; slight photophobia.

May 22. Conjunctivæ of lids smooth; quite red.

The temperature of these cases was carefully taken morning and evening for three days before the commencement of the treatment; during the days the applications were made, and for three days afterward.

These charts are not published because they were all of exactly the same character, and showed an invariable rise of 1° F. on the second or third day, which was immediately lost on the discontinuance of the treatment. Deductions made from so small a number of cases are of course not absolutely to be depended upon, but nevertheless they have a certain amount of real value. In appearance the cases at their acme resemble in all external particulars a case of ordinary purulent ophthalmia, but it will be noticed that in order to maintain this condition stimulus from repeated applications of the wash is necessary, and that as soon as these are omitted all symptoms, both local and constitutional, immediately begin to subside. The same control can be exercised to a partial degree by reducing the strength of the wash, as is seen in Case 9. This is a quality of the greatest importance, as it enables us, if the symptoms are becoming exaggerated, to check the progress of the inflammation immediately. From this fact danger to the other eye from inoculation is very slight, as there would have to be repeated inoculations to produce any effect. This is well illustrated in the reported cases, as in seven of them it was used in one eye only, and no precautions were taken to prevent such an accident, and yet in no case did it appear, which certainly is far from the every-day experience with purulent ophthalmia. From the time the discontinuance of the applications the recovery is apparently progressive until the conjunctiva is quiet and smooth. The principal symptoms, which seem to be most grave, and which appear to indicate a reduction of the strength of the wash or a discontinuance of the treatment before the usual number of nine applications is made, are continuous pain in the eye, spreading up over the forehead, and an œdema of the upper lid, together with chemosis

sufficient to make pressure on the cornea. In cases 4, 5, 6, and 9, where these symptoms were prominent, the results were not as good as in other cases, with the exception of case 9, where the wash was reduced one-half strength on the second day. It would seem, also, that the treatment needs to be pushed up to the production of the constitutional symptoms, as described in the notes. In case 2, where this was not done, there were a few granulations remaining, although they were apparently shrinking in size when the patient was discharged. This treatment of granular lids seems to be appropriate at all stages in which the palpebral conjunctiva is in a highly vascular condition, with perhaps this single exception: In cases where the granulations are sufficiently large to cause marked fullness of the lid, this, together with the superimposed œdema, seems to make the application of the conjunctiva of the upper lid to the globe of the eye sufficiently tense to prevent the influence of the wash extending over the whole lid, as well as irritating the cornea with its pressure.

With this treatment danger to the cornea necessarily presents itself for serious consideration. In none of these cases did any corneal complication occur during treatment, that is, while the applications were being made, but in five of the cases there supervened in from three days to three weeks afterward either slight ulcerations of the cornea or an increased vascularity. The result in none of these cases has been serious, but they serve to direct attention to what may be an important fact, namely, that three of the five, cases 4, 5, 6, had previously experienced burns or some accident to the eye, and one, case 8, had previously exhibited a tendency to serious corneal ulceration. There was no history of an accident in any of the other cases. Another factor that may have had an influence on these cases was that in three of them (cases 6, 8, 13) the third preparation mentioned at the commencement of this article was used, which I so prepared on the theory that the infusoria in the wash caused the inflammatory action; whether this is true or not, this wash certainly produced a much more violent inflammation that the other, and in the only other case in which it was used (case 9) it was necessary to dilute it very materially. This latter case did well. With a close attention to the symptoms, as before stated, and an avoidance of these classes of cases, I think we may have no fear of corneal complications. In advocacy of this treatment it may be safely said that in two-thirds of the cases the result was highly satisfactory; that more was accomplished in three days of active treatment and ten days to two weeks rest than is commonly the case by three months' active treatment in cases of similar character by the usual methods. The patients themselves testified to the relief they experienced from it by requesting the same treatment in the other eye when only one had at first been treated.

That it is a specific is not claimed, but of the fact that it is a step in advance there can be no doubt.—Myles Standish, M. D., in *Boston Med. and Surg. Journal*, June, 1883.

Abrus Precatorius and its Therapeutic Use in Ophthalmic Diseases.*—Abrus† precatorius Willd, or Indian Liquorice‡ (Jamaica Wild Liquorice; Liane de Réglisse, etc.) is a small, woody twiner, with a long, woody, tortuous, branched root, ½ inch or more in diameter. It has slender, branched stems and a brown bark. Its leaves are alternate, shortly stalked, spreading, two to six inches long, abruptly pinnate, leaflets in about 8 to 15 closely-placed pairs, ½ to ¾ inch long, oblong, very blunt at both ends. Flowers are pale rose-tinted, small, in small clusters arranged on large tuberosities along the outer side of a stiff, curved rachis. The fruit is a pod, about 1¼ inches long, broadly oblong, shortly beaked, somewhat compressed, two-valved, with imperfect septa between the seeds. Seeds four to six, globular-ovoid, about ¼ inch long (of the size of a small pea); testa hard, bright and shining, brilliant scarlet, with a black patch at one end round the hilum; cotyledons plane-convex; no endosperm.

The plant is very common in all parts of India, where it is probably indigenous.§ Bentley and Trimen say "that it is doubtlessly indigenous" in India, and that it has probably been only introduced in other tropical countries where it is found, namely, South China, the Pacific Islands, tropical Africa, the West Indies, etc. But Dr. Moura Brazil has met with it all through the Brazilian province of Ceará, in the interior plateaus as well as along the seacoast; and, while a member of the government commission appointed to regulate the boundary between Brazil and Bolivia, he found it in the large and rich province of Matto-Grosso, between the two river-courses of the La Plata and the Amazon, in the midst of virgin forests, where the hand of the husbandman had never penetrated. Yet he adds that it may have been carried there by birds. This appears not unlikely, since the seeds are so very conspicuous by their color.

The seeds (also known as jumble beads, love peas, crab's eyes, prayer beads, pois d'Amérique, Paternoster-Erbsen, etc.) have been incorrectly stated by some writers to be very deleterious, two or three being, according to Herman, a fatal dose. They are, on the contrary, perfectly innocuous when eaten, and, although hard and indigestible, yet have been used as food in Egypt. In Hindu medical authors, they are recommended, when reduced to a paste, to be applied locally in sciatica, stiffness of the shoulder-joint, paralysis, and other nervous diseases. They have also been used in skin-diseases and in fistula. When eaten, they are reputed to prevent fecundity.

The root is employed in all hot climates (except China) for the same purposes as licorice. It was introduced into the Bengal Pharmacopœia of 1844 and into the Indian Pharmacopœia of 1868. Berzelius also noticed (in 1827) a sweet principle in the leaves.

The seeds have been used, according to Dr. Moura Brazil, for many years, in chronic granular conjunctivitis, in the Brazilian provinces of Ceará and Piauhy. In some portions of the former the disease often assumes a very violent character, and the proportion of blind persons is very large. Whenever purulent ophthalmia is not carefully attended to, granulations are often formed, which are often followed by serious consequences. It is precisely in these chronic, granular cases, which have long resisted all other treatment, that the abrus (or jequirity, as it is called in Brazil) is used with advantage. Yet, since the dose of the remedy is not always properly adjusted, and as the intensity of the artificial conjunctivitis produced by it is in proportion to the concentration of the solution, it may happen that an eye, otherwise capable of being saved, may be entirely ruined by a careless application.

Dr. Castro e Silva (of Ceará) published a small memoir, in 1867, on the use of jequirity, in which he

*For further information on abrus, the reader is referred to Pharmacographia (2d ed.), p. 188; Bengal Dispensatory, p. 297; Drury, Useful Plants of India, p. 3; Waring in Madras Quart. Med. Jour., 1860, p. 61; Moodeen Sheriff, Supplement to the Pharm. of India (Madras, 1869), p. 17; Pharmacop. of India, p. 74, 446; Dalzell and Gibson, Bombay Flora, p. 76; Bouton, Medicinal Plants of Mauritius, p. 43. Roxburgh, Flora Ind., iii., 257.

†Abrus is given by Prosper Alpinus (1592) as the name of the plant in Egypt, where the seeds were used for necklaces. Théis derives it from $\alpha\beta\rho o\varsigma$, delicate.—Bentley and Trimen.

‡Jamaica Wild Licorice; Liane de Réglisse (Fr.); Liane á Reglisse; Faginolo Corallino, or Semi di Corallo (Ital.); Bejuco peronilla, B. peonilla (Puerto Rico); Orozuz abro de cuentas de rosario, or Abro de cuentas (Spain).

§In Sanskrit the plant (and its seed) is known by the name of gunjâ, and various authorities give a large number of synonyms (over fifty) for it, which are partly taken from dialects or modern Indian languages. The seeds are also called ratî in Hindustani (=raktikâ Sanskrit), which is at the same time a name for a small weight (two and three-sixteenth grains) used by Hindu apothecaries and jewellers. The Burmese also use the seeds as weights. The plant (and its seeds) is mentioned in Hindu medical works; compare U. Ch. Dutt, Hindu Materia Medica, p. 151.—Ed. New Rem.

draws attention to the dangers connected with its use. He, himself, employed it in the proportion of 1 part in 700 parts of water, in form of lotion, applied several times a day.

In the interior of Ceará and Piauhy, where the remedy is much abused, cases have been reported in which, after two or three applications, there appeared a very intense inflammation of the eyelids and conjunctiva, extending over the whole face, the neck, the upper part of the thorax, and sometimes even affecting the submaxillary glands.

The remedy is usually prepared in the following manner: The seeds are soaked during a few hours in boiling water, or during three or four days in cold water. When they are more or less softened, they are blanched, and the kernel reduced to a fine powder, which is macerated for twenty-four hours,* after which the liquid is filtered. The patient applies the liquid by bathing his eyes three times daily, in such a manner that it passes under the eyelids, or (if more concentrated) it may be dropped in the eye, during several consecutive days.

Immediately after the first application, the patient's eyes begin to run, and he begins to feel a burning heat and a sort of heaviness of the eyelids. On the next day, the inflammation is so intense that he can no longer open his eyes, the skin of the lids becomes shining, of a violet color, the conjunctival ecchymosis becomes more pronounced, accompanied with a more or less abundant muco-purulent discharge, and the patient complains of great pain.

Mr. Mello e Oliveiro found that if the seeds are treated with boiling water slightly acidulated with hydrochloric acid, a bright, rose-colored substance separates, which, on the addition of some 45 per cent. alcohol, changes to red, a grayish white substance of a gummy nature being deposited. The liquid, which has a red color (after the addition of alcohol), when exposed for some time to diffused daylight, acquires, after a short time, a greenish color persisting for several days. Ether separates from it an oil, and alcohol a gummy substance which is partly soluble in water and partly in alcohol.

After some hours, the portion soluble in alcohol changes its white color to bluish-green. No alkaloidal substance could be detected in it because—as the author says—the appointments of the laboratory did not permit the execution of certain methods of extraction.† The seeds were subjected to processes employed for the detection of organic acids, and the liquid, after being filtered and concentrated in vacuo, had an acid reaction to litmus. This liquid was at first golden yellow, turning to dirty yellow when exposed to light and air. The acidity, which at first was feeble but distinct, after a while became very faint. While freshly prepared, it possessed the characteristic odor of the freshly powdered seeds, but whether the acid is of a volatile nature has not been ascertained.

Dr. Moura Brazil made experiments with all the substances isolated by Mr. Mello e Oliveira. The essential oil was found inert when applied to the conjunctiva; so also the gray and the white resinous principles. The green principle, the odor of which recalls that of the coffee-green seeds, was employed in quantities of 0.2 gm. (ab. 3 grains) in 10 gm. (ab. 160 min.) of water (see below).

Dr. Moura Brazil tried various preparations of jequirity upon rabbits, and thus ascertained the portion and quantity which produces the most severe inflammation. At first he used the seeds and each one of its parts separately in fine powder and subjected to maceration, the cotyledons having been separated from the skin and likewise the embryonic radicle and gemmule. The results differed completely. With a solution of jequirity containing all these parts, and being of a strength of 1 in 20, the most intense inflammation was produced in the eyes of a rabbit. This inflammation yielded to no remedy and progressed to suppuration of the eye-ball, gangrene of the lids, and inflammation of the sub-maxillary glands. On using the cotyledons alone, without embryo (radicle and gemmule), in the same dose, the inflammation was much less intense. This is analogous to what has been observed in the case of the seeds of Jatropha Curcas Linné, which, when employed with radicle and gémmule, produce violent emesis, while without them they produce scarcely any vomiting at all.

The dose has gradually been reduced to four seeds (without the testa and the radicle). In this way a mild inflammation is produced, permitting one application per day and sufficient to heal granulations in a few days. The cotyledons were reduced to fine powder, then macerated, the liquid filtered, and finally applied to the conjunctiva with a brush.

The results obtained with the green principle (see above) were so surprising that the author thinks the jequirity will form an important agent in ophthalmic therapeutics, inasmuch as granulations which had for years resisted all other treatment, were cured by jequirity in from twenty to thirty days.

This is of the greatest consequence for science and humanity, particularly for countries in the north of Europe, where ophthalmic inflammations are very common.

To repeat, the form in which Dr. Moura Brazil uses the abrus is either a solution of 0.2 gm. (or ab. 3 grains) of the "greenish extractive" (above mentioned) in 10 gm. (160 min.) of water, or an infusion or cold macerate of the seeds (deprived of their testa, radicle and gemmule), made in the proportion of 0.5 gm. (ab. 8 grains) to 10 gm. (160 min.) of water.

The microscopic examination made by Dr. Silva e Chanjo of a recently prepared solution, and of one which was two months old, as well as an examination of the false membranes it produces, has furnished remarkable results.

In all fresh infusions of jequirity, Dr. Silva found large polyhedric cells filled with a granular protoplasm. He considers them to be the cells of the seed itself, separated by the bruising and the maceration. Besides these cells, there were found granulations, which, under a higher power, presented themselves as round, spherical, very brilliant bodies, capable of movement either around their axis or in a forward direction. With a lower power they looked like a fine powder. Dr. Silva considers them to be gonidia, or organs of non-sexual propagation.

On examining an infusion of older date, the aspect is different. Besides the powder—the gonidia—there are now noticed the true cells and tubes of a microscopic plant, with spores and mycelium. The spores are large, ovoid, sometimes solitary, or in groups of two, three, or more. The tubes either bear spores, or are bare and are branched. Between the spores and the tubes the above-mentioned powder (the gonidia) is noticed. The older the infusion, the better are these elements developed.

On the other hand, the microscopic examination of a false membrane (the conjunctival surface of the upper eye-lid, for instance,) treated with or produced by jequirity, has shown this to be of a true diphtheritic character. It was found to consist of an agglomeration of particles of pus, held together by a fibrous substance and covered with gonidia exactly like those noticed in the infusion of jequirity. On macerating the membrane in distilled water for forty-eight hours, the elements previously described were noticed to be much more developed. (For further details of the microscopic examination we must refer to the original.)*

Dr. L. de Wecker, of Paris, who appears to have made similar observations on jequirity at about the same time as Dr. Maura Brazil, confirms the latter's statements and sums up his observations as follows:

1. There is no doubt that an infusion of jequirity produces a purulent ophthalmia of a croupous nature,

* The original does not state in how much water, and adds "exposed to the night-dew." See page 162.—Ed. N. R.

† The analytical results here detailed are confusing, and certainly of no value whatever. Ed. N. R.

* Annales d'Oculistique, Bruxelles, December, 1882.

the intensity of which can be regulated by the strength and number of applications.

2. The cornea runs no risk during the development of the "jequiritic" ophthalmia.

3. The "jequiritic" ophthalmia cures granulations rapidly.

Dr. Wecker also states that he has vainly tried, by a careful study of Dr. Moura Brazil's memoir, to ascertain how the "active principle of a greenish color" should be prepared. Two eminent chemists were also consulted, who declared, as might have been expected, that it was impossible to say exactly what was meant by that principle. Mr. Rabinet, at Dr. Wecker's request, prepared an extract of the seeds, and obtained a product of a deep green color, which dissolved without difficulty in water, but the solution of it produced no action whatever upon the conjunctiva. Hence Dr. Wecker fell back upon the seeds, making an infusion in the usual manner.

Dr. Wecker also remarks that the preparation which has answered best in his hands, and which he is in the habit of using, is weaker than that used by Dr. Moura Brazil, being prepared from 10 gm. (155 grains) of the decorticated and powdered seeds macerated for 24 hours in 500 gm (17 fl. oz.) of cold water and filtered.—*New Remedies*, June, 1883.

The Use of Jequirity in Eye Diseases.—This remedy was first brought before European practitioners by De Wecker in the Annales d' Oculistique for July-August, 1882. The seeds of the jequirity plant, the Abrus precatorius, have been since a long time employed by the natives in some parts of Brazil in ocular affections. This method of treatment was first made known to De Wecker by one of his old patients, who, subsequently to his return home to Brazil from Paris, suffered a fresh outbreak of granular conjunctivitis, from which he was much relieved by the use of this drug.

The directions given were to soak for twenty-four hours 32 grains of the powdered seeds in 1,000 grammes of water. The patient bathes his eyes with the filtered product thrice daily for three days, at the end of which time he has become the subject of a severe conjunctivitis, which may be either purulent or more allied to the diphtheritic form. By the fifteenth day the inflammation ceases, and the granulations are found to be much diminished in size, or even destroyed.

The same author presents in the Annales d' Oculistique for November-December, 1882. an article on the ophthalmia produced by jequirity.

From numerous experiments he draws the following conclusions:

1. Without doubt, jequirity produces a purulent or even diphtheritic conjunctivitis, whose intensity can be readily regulated by the strength of the solution employed and the number of its applications. The strength may be anything between that given in the paper just referred to, and 10 grammes in 500 grammes of cold water.

2. The cornea runs no risk during the use of this remedy. It is true that in one case he has seen it suffer slightly and temporarily, but this was only when the applications had been pushed to such an extent that a membrane of the true diphtheritic appearance was produced.

3. The ophthalmia of jequirity cures granulations rapidly, and it is less unpleasant and less dangerous than that produced by the intentional inoculation of blenorrhœic matter.

He thinks that the ophthalmia of jequirity, which subsides spontaneously after eight or 12 days, can only be effectively produced while the patient resides within the walls of a hospital. Its curative effect on granulations and on corneal opacities goes on for a very considerable period subsequent to the inoculation.

In the same number Dr. Moura Brazil, of Rio de Janerio, discusses the treatment of granular conjunctivitis by jequirity. It appears that as early as 1867 Dr. Castro y Silva, of Ceará, published a memoir in which he speaks of the dangers attendant on the injudicious use of jequirity, so that it must even then have been well known in some districts of Brazil. The mode of preparation appears to have been as follows: The ripe seeds were soaked in cold water in the proportion of 1 to 700 for two or three days, or in boiling water for a few hours. Afterwards the embryos alone were picked out, reduced to fine powder, and then macerated for twenty-four hours. The infusion was finally filtered, and applied thrice daily between the lids for three days.

Dr. Moura Brazil records his own experiments on rabbits, which certainly show that under certain circumstances the inflammation may become violent and even quite uncontrollable. An infusion of the seeds in the proportion of one to twenty produced a severe diphtheritic conjunctivitis, followed, notwithstanding all treatment, by destruction of the cornea and suppurative panophthalmitis. Using the radicle and gemmule without the cotyledons, he found the inflammation less intense, though still beyond what he wished. In his treatment of patients with granular lids he has used it with great advantage at all stages of this affection, using the seeds freed from their covering and from the radicle and gemmule, in the proportion of one in twenty. He is clear in strongly recommending its use as beneficial in all stages of granular ophthalmia, and as infinitely superior to inoculation with blennorrhœic matter.—W. A. Brailey, M. D., in *London Medical Record*.

Jequirity.—The seeds which have been recently introduced under this name as a remedy in ophthalmic complaints, are derived from Abrus precatorius, a leguminous plant, indigenous to Africa and Southern Asia, and naturalized in tropical America. The hard seeds have a bright red integument with a black spot surrounding the raphe. They are used in Oriental countries for ornaments and similar to beads; in Brazil they have been highly valued for several centuries in the treatment of certain diseases of the eyes, an infusion being made of 32 powdered seeds (about 3 gm.), which are macerated for 24 hours with 500 gm. cold water, after which 500 gm. of hot water is added, and, when cooled, the liquid is filtered.

The results obtained by L. de Wecker, show that this infusion produces conjunctivitis purulenta or cruposa as rapidly as inoculation, and that with due care, the desired inflammation may be well regulated. The experiments have not been concluded yet, and the active principle of the seeds is still unknown; an alkaloid prepared by Rigand & Dusart, did not give similar good results, whether used by instillation or subcutaneously.—*Phar. Centralhalle*, 1883, p. 145.

Abrus Precatorius.—The following additional information respecting abrus precatorius, has come to hand:

From the April number of La Farmacia Moderna (Naples) we learn that Dr. G. Moyne, of Naples, has also used the infusion prepared as follows: Thirty-two of the seeds were thoroughly triturated and pulverized; the powder was macerated for twenty-four hours in 500 gm. of cold water, and then 500 gm. of hot water added. After the infusion was cold, it was filtered and preserved in well-stopped, dark-colored vials. When freshly prepared, the infusion is transparent and clear; after a few days, however, it becomes opalescent. At the same time it becomes less irritating. According to Dr. Moyne, it is useless to increase the amount of jequirity, since the effects will not be so satisfactory. The best proportion is 3.20 grams of the seeds (equally on an average thirty-two in number).

Finally, the editor of the Restaurador Farmaceutico of Barcelona, D. Juan Texidor, states in his journal (1883, '74) that Dr. D. José Maria Alcon has used the drug in thirty-nine cases, and found that effects

were only produced with an infusion made from four grams of the seeds in 500 gm. of boiling water. These discrepant statements are not calculated to create a great reliance upon the drug.—*New Remedies*, June, 1883.

Japanese Peppermint.—In more than one periodical the botanical name of this plant has been given as Mentha arvensis, var. purpurascens. It will be well, therefore, to point out that this is an error before the statement is further copied and the mistake perpetuated. The plant has green foliage, with not a trace of purple, and less deserves the name purpurascens than the true peppermint (Mentha piperita), of which a purplish-leaved form is well known. The mistake probably arose in the first place in a printer's error. The history is as follows:

For some years past a large quantity of a substance called menthol has been imported into this country, and extensively used as a topical application for the relief of neuralgia, and in some instances as an antiseptic. This substance in appearance closely resembles Epsom salts, and consists of crystals deposited in the oil of peppermint distilled from the Japanese peppermint plant. This oil, when separated from the crystals, is now largely used to flavor cheap peppermint lozenges, being less expensive than the English oil. The crystals deposit naturally in the oil upon keeping, but the Japanese extract the whole of it by submitting the oil several times in succession to a low temperature, when all the menthol crystallizes out from the oil and falls to the bottom of the vessel. The source of the Japanese peppermint oil has been stated to the Mentha arvensis, var. javanica. On examining several specimens of this plant in our national herbaria I found that the leaves tasted like those of the common garden mint (Mentha viridis), and not at all like peppermint, and that therefore the oil and menthol could not possibly be derived from this plant.

I then asked my friend, Mr. T. Christy, who takes great interest in medicinal plants, to endeavor to get specimens from Japan of the plant yielding the oil. After many vain attempts, he at last succeeded in obtaining live plants. These were cultivated in his garden at Malvern House, Sydenham, and when they flowered I examined the plant and found that it differed from other forms of M. arvensis in the taste, in the acuminate segments of the calyx of the flower, and in the longer leaf stalks; the leaves also taper more toward the base. Dr. Franchet, the greatest living authority on Japanese plants, to whom I sent specimens, confirmed my opinion as to the variety deserving a special name, and M. Malinvaud, a well known authority on mints, suggested the name piperascens, which I adopted, calling the plant Mentha arvensis, var. piperascens. Specimens of the plant kindly lent by Mr. Christy for the purpose were exhibited by me at an evening meeting of the Linnæan Society, and by a printer's error in the report of the remarks then made, the name of the plant appeared in print as Mentha arvensis, var. purpurascens.

I trust that the present note, through the medium of The Garden, will prevent the perpetuation of this error. This is the more important, as I hope that the plant will come into cultivation in this country. It is a robust plant of rapid growth, as easily cultivated as the English peppermint, and seems to require less moisture, and is therefore capable of cultivation in a great variety of localities. The increasing demand for menthol, which can only be produced in small quantities from the English peppermint, and the high price of English peppermint oil, lead to the hope that instead of importing menthol from Japan, it will be prepared in this country from the Japanese plant.

With the appliances or more advanced civilization, it ought to be possible for the oil and menthol to be made in this country at less price than the Japanese products now cost.

At the present time large quantities of cheap peppermint oil are imported into this country from the United States, and Chinese oil is imported into Bombay for use in the Government medical stores. There is no reason why this should be the case if the Japanese plant were cultivated in this country. In Ireland, where labor is cheap and the climate moist, this crop might afford a valuable source of income to enterprising cultivators. It may be interesting to note here that the plant used in China closely resembles the Japanese one, differing chiefly in the narrower and more glabrous leaves. I have therefore namad it Mentha arvensis f. glabrata, from specimens sent to me from Hong Kong, by Mr. C. Ford, the director of the Botanic Gardens there.—E. M. Holmes, in *Pharmaceutical Record*, June, 1883.

Euphorbia Pilulifera.—Dr. Matheson, of Aramac Hospital, Queensland, Australia, sends us the following on this new drug, which has recently been attracting attention as a remedy in asthma:

Mr. T. W. Shepherd, of Milson's Point, Sydney, has contributed two very interesting articles to Castner's Monthly, respecting the euphorbia pilulifera, or Queensland asthma-plant, in which he speaks in the most unqualified manner of the benefit it has conferred in his own case. He says he simply makes a tea of the plant, taking four doses per day for five days. He believes the first dose did him good. He pooh-poohs the idea of there being any poison in the plant, or any particular care necessary in its preparation, and is particularly severe on "the wicked designs of certain parties" who wish people to buy their particular preparations instead of infusing the tea for themselves. All this is very well; yet we all know that the whole family of the euphorbias is poisonous. Mr. Staiger showed us one the other day that is a veritable poison plant out west and doing vast harm to traveling cattle, and E. pilulifera is no exception to the rule. With all respect for the practical experience of Mr. Shepherd, we would give a word of caution to those who may be inclined to use it. We know of at least one instance in our own family where the use of this herb was attended with ill consequences, and one of our foremost medical men states that similar results have come under his observation in many cases. In our opinion it should be very carefully used, and then under the guidance of a medical man if possible. Speaking of euphorbias, we note that it is stated that the natives of the Northern Territory use the juice of a plant of this species as a specific in small-pox. Another variety is said to afford a juice which is a cure for cancer. It is applied to the sore, causing great pain at first, but gradually as it penetrates to the root of the disease makes a perfect cure. We await further particulars on this interesting subject.

Liquor Ergotæ Purificatus in the Radical Cure of Hydrocele.—In bringing this matter before the profession, I feel bound to admit that, but for a curious accidental circumstance, the agent might never have presented itself to my notice. In the year 1875, I proposed to operate upon a patient, aged 65, for the radical cure of a hydrocele of the tunica viginalis. The disease had existed for about ten years, and had been repeatedly emptied by other surgeons. At this time I removed, by the trocar and cannula, about 12 ounces of serum, and, by accident, took from my pocket a bottle containing about two drachms of liquid ergotæ in the place of the same quantity of tincture of iodine, which it was my intention to throw into the cavity. On my return home, I discovered the mistake, and watched the patient for some hours at intervals. No inflammatory state occurred, and there was entire absence of pain, so that I allowed my patient to return to his ordinary occupation the next morning. To the present time there has been no return of the abnormal secretion. I have since, on two occasions, used the same plan with perfect success, and I attribute the cure to a specific action, exerted by ergot which re-establishes the balance between secretion and absorption.—J. E. W. Walker, M. R. C. S. E., in *British Medical Journal*.